per year. Although the estimated benefits for Alternatives 2 and 3 are potentially significant, EPA rejected these alternatives because the Agency believes that the uncertainty about the health effects data does not warrant the additional expense associated with these regulatory alternatives.

Given the uncertainty in the health effects, and the resulting rejection of Alternatives 2 and 3, a comparison of Alternative 1 with the Preferred Alternative shows that Alternative 1 would have approximately the same benefits as the Preferred Alternative but with greater costs. This results from the inability of the Agency to estimate the additional benefits of reducing the bromate MCL. Alternative 1 was also determined to be unacceptable due to the potential for increased risk of microbial exposure. See section VII.A of today's action for a description of regulatory alternatives.

H. Benefits From the Reduction of Co-Occurring Contaminants

Installing certain technologies to control DBPs also has the added benefit of controlling other drinking water contaminants. For example, some membrane technologies (depending on pore size) installed to reduce DBP precursors can also reduce or eliminate many other drinking water contaminants, including arsenic and microbial pathogens. EPA has finalized a rule to further control arsenic level in drinking water and has proposed the Ground Water Rule to address microbial contamination. The Stage 2 DBPR is also being concurrently proposed with the Long Term 2 Enhanced Surface Water Treatment Rule. Because of the difficulties in establishing which systems would have multiple problems such as microbial contamination, arsenic, and DBPs (or any combination of the three), no estimate was made of the potential cost savings from addressing more than one contaminant simultaneously.

I. Are There Increased Risks From Other Contaminants?

Today's proposed rule may slightly shift the distribution of TTHM and HAAs to brominated species. Some systems, depending on bromide and organic precursor levels in the source water and technology selection, may experience a shift to higher ratios or concentrations of brominated DBPs while the overall TTHM or HAA5 concentration decreases. However, EPA anticipates that this phenomenon may only occur in a small percentage of systems affected. For most systems, overall levels of DBPs, as well as brominated DBP species, should decrease as a result of this rule.

EPA's analysis shows that a large portion of systems that do not currently meet Stage 2 requirements will do so by switching from chlorination to chloramination; approximately 5% of surface water plants and 1.3% of ground water plants in systems serving greater than 10,000 are estimated to convert to chloramination in order to comply with the Stage 2 DBPR from the Stage 1 DBPR (USEPA 2003i). A potential chloramination byproduct is N-nitrosodimethylamine (NDMA), a probable human carcinogen. The concern over the formation of NDMA in the treatment process is based on the compound's ability to persist for a long period of time in the distribution system. The mechanism of formation of NDMA, however, is still under examination. A number of ongoing studies will also evaluate occurrence, factors that affect NDMA formation, mechanisms, treatment effectiveness and improved analytical methods for measuring NDMA.

Another contaminant of concern to the Agency is chlorite. Levels may increase slightly because of technology shifts to chlorine dioxide resulting from this rule but very few systems (<0.1 percent) are predicted to install this technology. However, individual systems will not shift to chlorine dioxide unless they can meet the chlorite MCL (established under the Stage 1 DBPR) which is considered protective of public health.

EPA also considered the impact this rule may have on microbial contamination that may result from altering disinfection practices. To address this concern, the Agency developed this rule jointly with the Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR). EPA expects that the LT2ESWTR provisions will prevent significant increases in microbial risk resulting from the Stage 2 DBPR. EPA also expects the Ground Water Rule, scheduled for promulgation in 2003, to prevent any increases in microbial risk in ground water systems deemed vulnerable to source water contamination.

J. Effects on General Population and Subpopulation Groups

Section III of today's proposed rule discusses the health effects associated with DBPs on the general population as well as the effects on pregnant women and fetuses. In addition, health effects associated with children and pregnant women are discussed in greater detail in subsection VIII.G of this preamble.

K. Uncertainties in Baseline, Risk, Benefit, and Cost Estimates

Today's proposal models the current baseline risk from DBP exposure as well as the reduction in risk and the cost for various rule options. There is uncertainty regarding many aspects of this analysis including the risk calculation, the benefit estimate, and the cost estimates. EPA has tried to capture much of the uncertainty and also the variability associated with many of the inputs used in the economic analysis by using distributions or ranges as model inputs instead of point estimates whenever possible. The Stage 2 DBPR EA contains a more extensive discussion of the modeling techniques used to address uncertainty and variability (USEPA 2003i).

In addition, the Agency conducted sensitivity analyses to address uncertainty. The sensitivity analyses focus on various benefit and cost factors that may have a significant influence on the outcome of the rule. All of these sensitivity analyses are explained in more detail in the EA for the Stage 2 DBPR (USEPA 2003i).

The major source of benefit uncertainty is the scientific uncertainty regarding the impact of DBP exposure on reproductive and developmental outcomes. However, the Agency believes that the monetized value of these outcomes could be significant. As discussed in subsection VII.C.1, EPA performed an illustrative calculation that explored the potential implications for the proposed rule using some of the published results on fetal loss, but did not attempt to quantify benefits associated with reducing other reproductive and developmental endpoints potentially associated with DBP exposure.

Another possible underestimation of today's monetized benefits results from the inability of the Agency to quantify or monetize the potential benefit from avoiding other cancers associated with DBP exposure such as colon and rectal cancers. Furthermore, while the Agency estimated the range of bladder cancer risks avoided to be 0 to 182 cases per year, the true risk of bladder cancer avoided from decreased DBP exposure may be higher than this range.

While EPA believes it has accounted for the significant costs of today's proposed rule, there are uncertainties about some of the cost inputs. As discussed in subsection VII.D.4, cost estimates do not include some alternatives to installing treatment (*e.g.*, improving management of distribution system residence time) that may be a less costly means of complying with the

Stage 2 DBPR. The Agency also explored two additional uncertainties which might have the greatest impact on our current estimates by conducting sensitivity analyses. These include the impact of IDSE monitoring and the possibility that the primary analysis overestimates the compliance forecast for small surface water systems and all ground water systems. A detailed discussion of these analyses can be found in chapter 7 of the Economic Analysis (USEPA 2003i).

Last, EPA has recently proposed or finalized new regulations for arsenic, radon, and microbials in ground water systems (Ground Water Rule); *Cryptosporidium* in small surface water systems and filter backwash in all system sizes (LT1ESWTR and Filter Backwash Rule); as well as concurrently proposing additional microbial control in surface water systems (Long Term 2 Enhanced Surface Water Treatment Rule). These rules may have overlapping impacts on some drinking water systems but it is not possible to estimate these because of lack of information on co-occurrence. However, it is possible for a system to choose treatment technologies that would address multiple contaminants. Therefore, the total cost impact of these drinking water rules is uncertain; however, it may be less than the estimated total cost of all individual rules combined.

L. Benefit/Cost Determination for the Proposed Stage 2 DBPR

The Agency has determined that the quantified and unquantified benefits of the proposed Stage 2 DBPR justify the costs. As discussed previously, the main concern for the Agency and the Advisory Committee involved in the Stage 2 rulemaking process was to address potential reproductive and developmental impacts associated with exposure to high DBP levels. The proposed rule achieves this objective using the least cost alternative by modifying how the annual average DBP level is calculated. This will reduce both average DBP levels associated with bladder cancer (and possibly other cancers) and peak DBP levels which are potentially associated with reproductive and developmental effects. In addition, this rule may reduce uncertainty about drinking water quality and may allow some systems to avoid installing additional technology to meet future drinking water regulations.

Compared to other rule options consider by the Agency, the proposed rule option is also the most cost-effective. The cost-effectiveness analysis compares the annual dollar cost of the rule to the annual number of bladder cancer cases potentially avoided. For bladder cancer reduction, the cost per case avoided for the proposed rule would be $0.3 million if the PAR is 17%, and $3.1 million if the PAR is 2%, and also varies depending on the discount rate used.

M. Request for Comment

The Agency requests comment on all aspects of the rule's economic impact analysis. Specifically, EPA seeks input into the following issues: (1) To what extent can systems install treatment to address multiple contaminants?; (2) Are there methods for monetizing potential reproductive and developmental endpoints associated with DBP exposure?; (3) To what extent will use of chloramination increase levels of NDMA and potentially associated health risks, and how should this be considered in this rule making; and (4) How should the Agency value nonfatal cancers? Specifically, EPA uses a range of severities to calculate the WTP estimate to avoid a case of chronic bronchitis. Should the Agency only consider the most severe case of chronic bronchitis as a better proxy for a non-fatal cancer? Also, should the Agency use the risk-risk trade-off estimate of WTP to avoid a case of chronic bronchitis instead of the risk-dollar trade-off estimate (see the EA (USEPA 2003i) for a complete discussion of these issues)?

VIII. Statutory and Executive Order Reviews

A. Executive Order 12866: Regulatory Planning and Review

Under Executive Order 12866, (58 FR 51735, October 4, 1993) the Agency must determine whether the regulatory action is ''significant'' and therefore subject to OMB review and the requirements of the Executive Order. The Order defines ''significant regulatory action'' as one that is likely to result in a rule that may:

(1) Have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or Tribal governments or communities;

(2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(3) Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or

(4) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

Pursuant to the terms of Executive Order 12866, it has been determined that this rule is a ''significant regulatory action.'' As such, this action was submitted to OMB for review. Changes made in response to OMB suggestions or recommendations will be documented in the public record.

B. Paperwork Reduction Act

The information collection requirements in this proposed rule have been submitted for approval to the Office of Management and Budget (OMB) under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* The Information Collection Request (ICR) document prepared by EPA has been assigned ICR No. 2068.01 (USEPA 2003m).

The information collected as a result of this rule will allow the States and EPA to determine appropriate requirements for specific systems, and to evaluate compliance with the rule. For the first 3 years after Stage 2 DBPR promulgation, the major information requirements involve monitoring activities, which include conducting the IDSE and submission of the IDSE report, and tracking compliance. The information collection requirements are mandatory (Part 141), and the information collected is not confidential.

The estimate of annual average burden hours for the Stage 2 DBPR for systems and States is 248,568 hours. This estimate covers the first three years of the Stage 2 DBPR and includes implementation of Stage 2A and most of the IDSE (small system reports are not due until the fourth year). The annual average aggregate cost estimate is $18.0 million for operation and maintenance as a purchase of service for lab work, and $6.8 million is associated with labor. The annual burden hour per response is 2.59 hours. The frequency of response (average responses per respondent) is 11.8 annually. The estimated number of likely respondents is 8,131 per year (the product of burden hours per response, frequency, and respondents does not total the annual average burden hours due to rounding). Because disinfecting systems have already purchased basic monitoring equipment to comply with the Stage 1 DBPR, EPA assumes no capital start-up costs are associated with the Stage 2 DBPR ICR.

Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time

needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

An Agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations in 40 CFR are listed in 40 CFR part 9.

To comment on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques, EPA has established a public docket for this rule, which includes this ICR, under Docket ID No. OW–2002–0043. Submit any comments related to the ICR for this proposed rule to EPA and OMB. See **ADDRESSES** section at the beginning of this notice for where to submit comments to EPA. Send comments to OMB at the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street, NW., Washington, DC 20503, *Attention:* Desk Office for EPA. Since OMB is required to make a decision concerning the ICR between 30 and 60 days after August 18, 2003, a comment to OMB is best assured of having its full effect if OMB receives it by September 17, 2003. The final rule will respond to any OMB or public comments on the information collection requirements contained in this proposal.

C. Regulatory Flexibility Act

The Regulatory Flexibility Analysis (RFA), as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996, 5 U.S.C. 601 *et seq.,* generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute, unless the Agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

The RFA provides default definitions for each type of small entity. It also authorizes an agency to use alternative definitions for each category of small entity, ''which are appropriate to the activities of the agency'' after proposing the alternative definition(s) in the **Federal Register** and taking comment. 5 U.S.C. 601(3) through (5). In addition to the above, to establish an alternative small business definition, agencies must consult with SBA's Chief Counsel for Advocacy.

For purposes of assessing the impacts of today's proposed rule on small entities, EPA considered small entities to be public water systems serving 10,000 or fewer persons. This is the cut-off level specified by Congress in the 1996 Amendments to the Safe Drinking Water Act for small system flexibility provisions. In accordance with the RFA requirements, EPA proposed using this alternative definition in the **Federal Register** (63 FR 7620 (February 13, 1998)), requested public comment, consulted with the Small Business Administration (SBA), and expressed its intention to use the alternative definition for all future drinking water regulations in the Consumer Confidence Reports regulation (63 FR 44511 (August 19, 1998)). As stated in that final rule, the alternative definition is applied to this regulation.

After considering the economic impacts of today's proposed rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. We have determined that 75 small systems using surface water or ground water under the direct influence of surface water (GWUDI), which are 1.67% of all such systems affected by the Stage 2 DBPR, will experience an impact of greater than or equal to 1% of their revenues, and 49 small systems using surface water or GWUDI, which are 1.09% of all such systems affected by the Stage 2 DBPR, will experience an impact of greater than or equal to 3% of their revenues; further, 109 small ground water systems, which are 0.28% of all such systems affected by the Stage 2 DBPR, will experience an impact of greater than or equal to 1% of their revenues, and 38 small ground water systems, which are 0.10% of all such systems affected by the Stage 2 DBPR, will experience an impact of greater than or equal to 3% of their revenues (*see* Tables VIII–1 and VIII–2).

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Table VIII-1. Annualized Compliance Cost as a Percentage of Revenues or Expenditures for All Small Entities Using Surface Water and GWUDI.

Entity by System Size	Number of Small Systems (Percent)		Average Annual Estimated Revenues[1] per System ($)	Experiencing Costs of ≥1% of their Revenues		Experiencing Costs of ≥3% of their Revenues	
				Percent of Systems	Number of Systems	Percent of Systems	Number of Systems
	A		B	E	F=A*E	G	H=A*G
Small Governments	**2,238**	**50%**	**$2,396,249**	**1.67%**	**37**	**1.09%**	**24**
<100	384		$2,396,249	1.27%	5	0.00%	-
101-500	513		$2,396,249	1.53%	8	1.17%	6
501-1,000	283		$2,396,249	1.58%	4	1.46%	4
1,001-3,300	538		$2,396,249	1.79%	10	1.32%	7
3,301-10,000	519		$2,396,249	5.61%	29	3.71%	19
Small Businesses	**1,835**	**41%**	**$2,391,978**	**1.67%**	**31**	**1.09%**	**20**
<100	315		$2,391,978	1.27%	4	0.00%	-
101-500	421		$2,391,978	1.57%	7	1.17%	5
501-1,000	232		$2,391,978	1.58%	4	1.46%	3
1,001-3,300	441		$2,391,978	1.79%	8	1.32%	6
3,301-10,000	426		$2,391,978	5.61%	24	3.71%	16
Small Organizations	**403**	**9%**	**$4,446,165**	**1.27%**	**5**	**0.76%**	**3**
<100	69		$4,446,165	0.00%	-	0.00%	-
101-500	92		$4,446,165	1.44%	1	0.61%	1
501-1,000	51		$4,446,165	1.46%	1	0.75%	0
1,001-3,300	97		$4,446,165	1.32%	1	0.93%	1
3,301-10,000	94		$4,446,165	5.02%	5	3.71%	3
All Small Entities	**4,476**	**100%**	**$2,578,991**	**1.67%**	**75**	**1.09%**	**49**
<100	768		$2,578,991	1.27%	10	0.00%	-
101-500	1,027		$2,578,991	1.44%	15	1.17%	12
501-1,000	567		$2,578,991	1.58%	9	1.46%	8
1,001-3,300	1,075		$2,578,991	1.55%	17	1.32%	14
3,301-10,000	1,039		$2,578,991	5.61%	58	3.71%	39

[1] Revenue information was used whenever available. When it was not available, different measures, such as sales or annual operating expenditures, were used. Data were not available to differentiate revenue by system size.

Note: Detail may not add due to independent rounding.

Source: Economic Analysis (USEPA 2003i)

Table VIII-2. Annualized Compliance Cost as a Percentage of Revenues or Expenditures for All Small Entities Using Ground Water Only.

Entity by System Size	Number of Small Systems (Percent)		Average Annual Estimated Revenues[1] per System ($)	Experiencing Costs of ≥1% of their Revenues		Experiencing Costs of ≥3% of their Revenues	
				Percent of Systems	Number of Systems	Percent of Systems	Number of Systems
	A		B	E	F=A*E	G	H=A*G
Small Governments	**19,133**	**50%**	**$2,396,249**	**0.28%**	**54**	**0.10%**	**19**
<100	5,641		$2,396,249	0.00%	-	0.00%	-
101-500	7,269		$2,396,249	0.13%	9	0.00%	-
501-1,000	2,403		$2,396,249	0.75%	18	0.07%	2
1,001-3,300	2,599		$2,396,249	1.26%	33	0.04%	1
3,301-10,000	1,221		$2,396,249	1.32%	16	1.32%	16
Small Businesses	**15,689**	**41%**	**$2,391,978**	**0.28%**	**44**	**0.10%**	**16**
<100	4,625		$2,391,978	0.00%	-	0.00%	-
101-500	5,960		$2,391,978	0.13%	8	0.00%	-
501-1,000	1,970		$2,391,978	0.75%	15	0.07%	1
1,001-3,300	2,131		$2,391,978	1.26%	27	0.04%	1
3,301-10,000	1,001		$2,391,978	1.32%	13	1.32%	13
Small Organizations	**3,444**	**9%**	**$4,446,165**	**0.10%**	**4**	**0.01%**	**0**
<100	1,015		$4,446,165	0.00%	-	0.00%	-
101-500	1,308		$4,446,165	0.00%	-	0.00%	-
501-1,000	433		$4,446,165	0.14%	1	0.00%	-
1,001-3,300	468		$4,446,165	0.04%	0	0.02%	0
3,301-10,000	220		$4,446,165	1.32%	3	0.04%	0
All Small Entities	**38,265**	**100%**	**$2,578,991**	**0.28%**	**109**	**0.10%**	**38**
<100	11,282		$2,578,991	0.00%	-	0.00%	-
101-500	14,537		$2,578,991	0.13%	19	0.00%	-
501-1,000	4,806		$2,578,991	0.14%	7	0.07%	3
1,001-3,300	5,198		$2,578,991	1.26%	66	0.04%	2
3,301-10,000	2,443		$2,578,991	1.32%	32	1.32%	32

[1] Revenue information was used whenever available. When it was not available, different measures, such as sales or annual operating expenditures, were used. Data were not available to differentiate revenue by system size.
Note: Detail may not add due to independent rounding.
Source: Economic Analysis (USEPA 2003i)

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As a result of the input received from stakeholders, the EPA workgroup, the Advisory Committee, and other interested parties, EPA has developed MCLs using locational running annual averages (LRAA) of 0.080 and 0.060 mg/L for TTHM and HAA5 respectively, in combination with Initial Distribution Systems Evaluations (IDSE), as the preferred Stage 2 DBPR option. LRAAs are running annual averages calculated for each sample location in the distribution system. Since many small systems only monitor at one location, they will effectively base their compliance with the Stage 1 DBPR on an LRAA and therefore will not be significantly affected by the Stage 2 DBPR. In addition to meeting the MCLs for TTHM and HAA5, systems will be required to conduct IDSEs. The purpose of the IDSE is to identify compliance monitoring sites representing high TTHM and HAA5 levels in the distribution system. According to the Stage 2 DBPR Economic Analysis (USEPA 2003i), only 17% of all small water systems will conduct IDSE monitoring because small NTNCWSs are exempt from IDSE monitoring, systems serving fewer than 500 people may receive a waiver from their States, and other systems are eligible for a 40/30 certification if all compliance monitoring samples have been ≤ 0.040 and ≤ 0.030 mg/L for TTHM and HAA5 respectively during the previous two years. A large number of small ground water systems will qualify for this certification. This provision is described in more detail in section V.H. of this preamble.

Although not required by the RFA to convene a Small Business Advocacy

Review (SBAR) Panel because EPA determined that this proposal would not have a significant economic impact on a substantial number of small entities, EPA did convene a panel to obtain advice and recommendations from representatives of the small entities potentially subject to this rule's requirements.

Before convening the SBAR Panel, EPA consulted with a group of 24 SERs likely to be impacted by the Stage 2 M–DBP Rules. The SERs included small system operators, local government officials, and small nonprofit organizations. The SERs were provided with background information on the Safe Drinking Water Act, Stage 1 DBPR, IESWTR, and Stage 2 DBPR alternatives and unit cost analyses resulting from using different technologies to meet the required MCLs in preparation for the teleconferences on January 28, 2000, February 25, 2000, and April 7, 2000. This information package included data on options and preliminary unit costs for treatment enhancements under consideration. It is important to note that, since EPA did not consider the IDSE requirements until after these consultations with SERs and the SBAR panel, no comments were received on the IDSE requirements from the SERs or the SBAR panel. However, small system representatives were included in the Advisory Committee that recommended the IDSE.

During these conference calls, the information was discussed and EPA provided feedback and noted these initial SER comments. Following the calls, the SERs were asked to provide input on the potential impacts of the rule. Seven SERs provided written comments on these materials. These comments were provided to the SBAR Panel when the Panel convened in April 25, 2000. After a teleconference between the SERs and the Panel on May 25, 2000, the SERs were invited to provide additional comments on the information provided. Seven SERs provided additional comments on the rule components.

In general, the SERs consulted on the Stage 2 M–DBP rules were concerned about the impact of these proposed rules on small water systems. They were particularly concerned with acquiring the technical and financial capability to implement requirements, maintaining flexibility to tailor requirements to their needs, and the limitations of small systems.

The Small Business Advocacy Review (SBAR) Panel members for the Stage 2 DBPR were: the Small Business Advocacy Chair of the Environmental Protection Agency, the Chief of the Standards and Risk Reduction Branch of the Office of Ground Water and Drinking Water within EPA's Office of Water, the Administrator of the Office of Information and Regulatory Affairs within the Office of Management and Budget, and the Chief Counsel for Advocacy of the Small Business Administration. The Panel convened on April 25, 2000, and met five times before the end of the 60-day Panel period on June 23, 2000. The SBAR Panel's report, ''Final Report of the Small Business Advocacy Review Panel on Stage 2 Disinfectants and Disinfection Byproducts Rule (Stage 2 DBPR) and Long-Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR)'', the Small Entity Representatives (SERs) comments on components of the Stage 2 MDBP Rules, and the background information provided to the SBAR Panel and the SERs are available for review in the Office of Water Docket.

Today's proposal takes into consideration the recordkeeping and reporting concerns identified by the Panel and the SERs. The Panel recommended that EPA evaluate ways to minimize the rule recordkeeping and reporting burdens by ensuring that States have appropriate capacity for rule implementation and that EPA provide as much monitoring flexibility as possible to small systems. Continuity with the Stage 1 DBPR was maintained to the extent possible to ease the transition to the Stage 2 DBPR, especially for small systems. EPA's decision to maintain the same MCLs for TTHM and HAA5 will also help to minimize the additional implementation burden. Generally, routine monitoring will be similar in frequency to monitoring for the Stage 1 DBPR, and systems with low DBP levels will still be eligible for reduced monitoring. Many small systems will conduct the same amount of monitoring for the Stage 2 DBPR as for the Stage 1 DBPR. Surface and ground water community water systems (CWSs) serving 500 to 9,999 people and ground water systems serving at least 10,000 people may be required to add one sampling site and take an additional quarterly TTHM/HAA5 sample at that site. Also, EPA has specified consecutive system requirements; these will be new requirements in States where consecutive systems are not required to comply with some or all Stage 1 DBPR requirements. As noted before, since some small systems will be effectively complying with such requirements under the Stage 1 DBPR, the Stage 2 DBPR will not impose any additional burden on them.

The Panel also noted the concern of several SERs that flexibility should be provided in the compliance schedule of the rule. SERs noted the technical and financial limitations that some small systems will have to address, the significant learning curve for operators with limited experience, and the need to continue providing uninterrupted service as reasons why additional compliance time may be needed for small systems. The panel encouraged EPA to keep these limitations in mind in developing the proposed rule and provide as much compliance flexibility to small systems as is allowable under the SDWA. EPA believes that the proposed compliance schedules provides sufficient time for small systems to achieve compliance.

Under the proposed LT2ESWTR, certain subpart H systems with low levels of indicators such as *E. coli* will not have to monitor for *Cryptosporidium*. The efficacy of *E. coli* as an indicator will be evaluated using the large system data. Thus, small systems *E. coli* monitoring cannot be initiated until large and medium system monitoring has been completed. The LT2ESWTR compliance time line for small systems thus lags 1.5 to 2.5 years behind the large and medium systems; timeline. Because the Stage 2 DBPR must be implemented on a simultaneous schedule, the compliance timeline is similarly delayed 1.5 to 2.5 years behind large and medium systems. In addition, if capital improvements are necessary for a particular PWS to comply, a State may allow the system up to an additional two years to comply with the MCL. The Agency is developing guidance manuals to assist small entities with their compliance efforts.

The Panel considered a wide range of options and regulatory alternatives for providing small businesses with flexibility in complying with the Stage 2 DBPR. The Panel recognized the concern shared by most stakeholders regarding the need to reduce DBP variability in the distribution system. This concern comes from recent studies that, while not conclusive, suggest that there may be adverse reproductive effects associated with relatively short-term exposure to high levels of DBPs. Many small systems will be monitoring at only a single point in the distribution system (designed to represent the point of maximum TTHM and HAA5 exposure), and many small systems will be monitoring only once during the year, at a time which corresponds to the season with the highest potential occurrence.

Since there is a chance for this single sample to exceed an MCL, today's proposal requires systems that exceed an MCL on an annual or less frequent sample to begin increased (quarterly) monitoring rather than immediately being in violation of the MCL. The system must comply with the MCL as an LRAA once it has collected four quarterly samples. This allows small systems to generally monitor less frequently (to reduce their monitoring burden) during the period when the highest DBP levels are expected (to protect public health) without penalizing them (by requiring them to meet an MCL that would effectively be based on a single highest value if the systems were immediately in violation after a single sample exceeds an MCL). This compliance determination is consistent with requirements for systems that monitor quarterly for whom compliance is based on the compliance monitoring results of the previous four quarters.

It is important to note that based on the IDSE results, some small systems will have a high TTHM site that is different from the high HAA5 site. These systems will need to monitor at two sites under the Stage 2 DBPR. EPA believes that an approach based on compliance with 0.080 mg/L TTHM and 0.060 mg/L HAA5 LRAAs is an effective way of addressing concerns regarding locational variability.

In addressing seasonal variability, the Panel was concerned about a regulatory alternative requiring compliance with 0.080 mg/L TTHM and 0.060 mg/L HAA5 single highest value MCL (Alternative 2), because it would impose significant additional cost on some small systems. The Panel recommended that EPA instead explore an approach under which individual high values might trigger additional assessment and/or notification requirements, rather than an MCL violation.

EPA agrees with the panel recommendations on a single highest value MCL. Under today's proposal, public water systems are required to maintain a record of TTHM and HAA5 concentrations detected at each sample location. As part of the sanitary survey process, systems are required to conduct an evaluation and consult with their State regarding significant excursions in TTHM and HAA5 occurrence that have occurred. EPA is developing guidance for public water systems and States on how to identify significant excursions and conduct significant excursion evaluations, and how to reduce DBP levels through actions such as distribution system operational changes (USEPA 2003n) (Section V.E.).

The Panel noted the strong concerns expressed by some SERs about the uncertainty in the current scientific evidence regarding health effects from exposure to DBPs, particularly regarding short term exposure. A Panel member recommended that EPA give further serious consideration to making a determination that the currently available scientific evidence does not warrant imposing additional regulatory requirements beyond those in the Stage 1 DBPR at this time. This Panel member recommended that EPA instead continue to vigorously fund ongoing research in health effects, occurrence, and appropriate treatment techniques for DBPs, and reconsider whether additional requirements are appropriate during its next SDWA required six-year review of the standard. This panel member also recommended that EPA separately explore whether adequate data exist to warrant regulation of NTNCWSs at a national level at this time.

EPA has considered these recommendations and believes the Stage 2 DBPR is needed at this time to protect public health. EPA's main mission is the protection of human health and the environment. When carrying out this mission, EPA must often make regulatory decisions with less than complete information and with uncertainties in the available information. EPA believes it is appropriate and prudent to err on the side of public health protection when there are indications that exposure to a contaminant may present risks to public health, rather than take no action until risks are unequivocally proven. Therefore, while recognizing the uncertainties in the available information, EPA believes that the weight of evidence represented by the available epidemiology and toxicology studies on chlorinated water and DBPs supports a hazard concern and a protective public health approach to regulation. In addition, EPA has an ongoing research program to study DBP health effects, occurrence, and treatment.

EPA continues to be interested in the potential impacts of the proposed rule on small entities and welcome comments on issues related to such impacts.

D. Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104–4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and Tribal governments and the private sector. Under UMRA section 202, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with ''Federal mandates'' that may result in expenditures by State, local, and Tribal governments, in the aggregate, or by the private sector, of $100 million or more in any one year. Before promulgating an EPA rule for which a written statement is needed, section 205 of the UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective or least burdensome alternative if the Administrator publishes with the final rule an explanation why that alternative was not adopted.

Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including Tribal governments, it must have developed, under section 203 of the UMRA, a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates and informing, educating, and advising small governments on compliance with the regulatory requirements.

EPA has determined that this rule does not contain a Federal mandate that may result in expenditures of $100 million or more for State, local and Tribal governments, in the aggregate, or the private sector in any one year. Based on total estimated nominal costs incurred by year, costs for public or private systems are not expected to exceed $100 million in any one year. In addition, total estimated annualized costs of this rule are $59 to $65 million for all systems, including labor burdens that States would face, such as training employees on the requirements of the Stage 2 DBPR, responding to PWS reports, and record keeping. Thus, today's proposed rule is not subject to the requirements of sections 202 and 205 of the UMRA.

EPA has determined that the Stage 2 DBPR contains no regulatory requirements that might significantly or uniquely affect small governments (see Tables VIII–1 and VIII–2). Since the Stage 2 DBPR affects all size systems

and the impact on small entities will be 0.00 to 0.11 percent of revenues, the Stage 2 DBPR is not subject to the requirements of section 203 of UMRA.

Nevertheless, in developing this rule, EPA consulted with small governments (*see* sections VIII.B., VIII.C. and VIII.F.). In preparation for the proposed Stage 2 DBPR, EPA conducted an analysis of small government impacts and included small government officials or their designated representatives in the rulemaking process. As noted previously, a variety of stakeholders, including small governments, had the opportunity for timely and meaningful participation in the regulatory development process through the SBREFA process, public stakeholder meetings, and Tribal meetings. Representatives of small governments took part in the SBREFA process for this rulemaking and they attended public stakeholder meetings. Through such participation and exchange, EPA notified several potentially affected small governments of requirements under consideration and provided officials of affected small governments with an opportunity to have meaningful and timely input into the development of this regulatory proposal.

The Agency has developed fact sheets that describe requirements of the proposed Stage 2 DBPR. These fact sheets are available by calling the Safe Drinking Water Hotline at 800–426–4791.

E. Executive Order 13132: Federalism

Executive Order 13132, entitled ''Federalism'' (64 FR 43255, August 10, 1999), requires EPA to develop an accountable process to ensure ''meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications.'' ''Policies that have federalism implications'' is defined in the Executive Order to include regulations that have ''substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.''

This proposed rule will not have federalism implications. It will not impose substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. The proposed rule has one-time costs for implementation of approximately $68.5 million. Thus, Executive Order 13132 does not apply to this rule.

Although Executive Order 13132 does not apply to this rule, EPA did consult with State and local officials in developing this proposed regulation. On February 20, 2001, EPA held a dialogue on both the Stage 2 DBPR and LT2ESWTR with representatives of State and local governmental organizations including those that represent elected officials. Representatives from the following organizations attended the consultation meeting: Association of State Drinking Water Administrators (ASDWA), the National Governors' Association (NGA), the National Conference of State Legislatures (NCSL), the International City/County Management Association (ICMA), the National League of Cities (NLC), the County Executives of America, and health departments. At the consultation meeting, questions ranged from a basic inquiry into how *Cryptosporidium* gets into water to more detailed queries about anticipated implementation guidance, procedures, and schedules. No concerns were expressed. Some of the State and local organizations who attended the governmental dialogue on upcoming microbial and disinfection byproduct rulemakings were also participants in the Advisory Committee meetings and signed the Agreement in Principle. In addition, EPA consulted with a mayor in the SBREFA consultation described in section VIII B.

In the spirit of Executive Order 13132, and consistent with EPA policy to promote communications between EPA and State and local governments, EPA specifically solicits comment on this proposed rule from State and local officials.

F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

Executive Order 13175, entitled ''Consultation and Coordination with Indian Tribal Governments'' (65 FR 67249, November 9, 2000), requires EPA to develop ''an accountable process to ensure meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications.'' ''Policies that have tribal implications'' is defined in the Executive Order to include regulations that have ''substantial direct effects on one or more Indian tribes, on the relationship between the Federal government and the Indian tribes, or on the distribution of power and responsibilities between the Federal government and Indian tribes.''

Under Executive Order 13175, EPA may not issue a regulation that has Tribal implications, that imposes substantial direct compliance costs, and that is not required by statute, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by Tribal governments, or EPA consults with Tribal officials early in the process of developing the proposed regulation and develops a Tribal summary impact statement.

EPA has concluded that this proposed rule may have Tribal implications because it may impose substantial direct compliance costs on Tribal governments, and the Federal government will not provide the funds necessary to pay those costs.

Total Tribal costs are estimated to be approximately $199,372 per year (at a 3 percent discount rate) and this cost is distributed across 559 Tribal systems. The cost for individual systems depend on system size and source water type. Of the 559 Tribes that may be affected in some form by the Stage 2 DBPR, 502 use ground water as a source and 57 systems use surface water or GWUDI. Since the majority of Tribal systems are ground water systems serving fewer than 500 people, less than 10 percent of all Tribal systems will likely have to conduct an IDSE. As a result, the Stage 2 DBPR is most likely to have an impact on Tribes using surface water or GWUDI serving more than 500 people. Accordingly, EPA provides the following Tribal summary impact statement as required by section 5(b) of Executive Order 13175. EPA provides further detail on Tribal impact in the *Economic Analysis for the Stage 2 Disinfectants and Disinfection Byproduct Rule* (USEPA 2003i).

EPA consulted with Tribal officials early in the process of developing this regulation to permit them to have meaningful and timely input into its development. Consistent with Executive Order 13175, EPA engaged in outreach and consultation efforts with Tribal officials in the development of this proposed regulation. The most long-term participation of Tribes was on the Advisory Committee through a representative of the All Indian Pueblo Council (AIPC), which is associated with approximately 20 Tribes.

In addition to obtaining Tribal input during the Advisory Committee negotiations, EPA presented the Stage 2 DBPR at the 16th Annual Consumer Conference of the National Indian Health Board, the Environmental Council's Annual Conference, and the EPA/Inter-Tribal Council of Arizona, Inc. Over 900 attendees representing Tribes from across the country attended the National Indian Health Board's Consumer Conference and over 100

Tribes were represented at the annual conference of the National Tribal Environmental Council. Representatives from 15 Tribes participated at the EPA/Inter-Tribal Council of Arizona meeting. At the first two conferences, an EPA representative conducted workshops on EPA's drinking water program and upcoming regulations, including the Stage 2 DBPR. EPA sent the presentation materials and a meeting summary to over 500 Tribes and Tribal organizations.

Fact sheets describing the requirements of the proposed rule and requesting Tribal input were distributed at an annual EPA Tribal meeting in San Francisco, and at a Native American Water Works Association meeting in Scottsdale, Arizona. EPA also worked through its Regional Indian Coordinators and the National Tribal Operations Committee to raise awareness of the development of the proposed rule. EPA mailed fact sheets on the Stage 2 DBPR to all of the federally recognized Tribes in November 2000, as well as the Tribal Caucus of the National Tribal Operations Committee.

A few Tribes responded by requesting more information and expressing concern about having to implement too many regulations. Some members of the Tribal Caucus noted that the rule would have a benefit. They also expressed a concern about infrastructure costs and the lack of funding attached to the rule. In response to one Tribal representative's comments on the November 2000 mailout, EPA explained the health protection benefit expected to be gained by this proposed rule. EPA also directed those who asked for more information to the Agreement in Principle on the EPA Web site.

EPA also held a teleconference for Tribal representatives on January 24, 2002. Prior to the teleconference, invitations were sent to all of the Federally-recognized Tribes, along with fact sheets explaining the rule. Twelve Tribal representatives and four regional Tribal Program Coordinators attended. The Tribal representatives requested further explanation of the rule and expressed concerns about funding sources. EPA also received calls from Tribes after the teleconference which provided EPA with further feedback. In the spirit of Executive Order 13175, and consistent with EPA policy to promote consultation between EPA and Tribal governments, EPA specifically solicits additional comment on this proposed rule from Tribal officials.

G. Executive Order 13045: Protection of Children From Environmental Health and Safety Risks

Executive Order 13045: ''Protection of Children From Environmental Health Risks and Safety Risks'' (62 FR 19885, April 23, 1997) applies to any rule that: (1) Is determined to be ''economically significant'' as defined under Executive Order 12866, and; (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, the Agency must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

While this proposed rule is not subject to the Executive Order because it is not economically significant as defined in Executive Order 12866, EPA nonetheless has reason to believe that the environmental health or safety risk (*i.e.,* the risk associated with DBPs) addressed by this action may have a disproportionate effect on children. As a matter of EPA policy, we have therefore assessed the environmental health or safety effect of DBPs on children. EPA has consistently and explicitly considered risks to infants and children in all assessments developed for this rulemaking. The results of the assessments are contained in section III of this preamble, *Health Risks to Fetuses, Infants, and Children: A Review* (USEPA 2003a), and in the Economic Analysis (USEPA 2003i). A copy of all documents has been placed in the public docket for this action.

EPA's Office of Water has historically considered risks to sensitive subpopulations (including fetuses, infants, and children) in establishing drinking water assessments, health advisories or other guidance, and standards (USEPA 1989c and USEPA 1991a). Waterborne disease from pathogens in drinking water is a major concern for children and other subgroups (elderly, immune compromised, pregnant women) because of their increased vulnerabilities (Gerba *et al.* 1996). There is a concern for potential reproductive and developmental risks posed by DBPs to children and pregnant women (USEPA 1994b; USEPA 1998c, Reif *et al.* 2000; Tyl, 2000). Specific to this action, human epidemiology and animal toxicology studies on DBPs have shown potential increased risks for spontaneous abortion, still birth, neural tube defects, cardiovascular effects and low birth weight. This rule is designed to lower those risks. EPA has provided an illustrative calculation of potential fetal losses avoided in section VII.C.1.

Section V.D of this preamble presents the regulatory alternatives that EPA evaluated for the proposed Stage 2 DBPR, and the Economic Analysis (USEPA 2003i) provides a more detailed discussion. The Agency considered four alternatives involving different MCLs and different compliance calculations. The proposed alternative was recommended by the Advisory Committee and selected by EPA as the Preferred Regulatory Alternative because it provides significant public health benefits for an acceptable cost. EPA's analysis of benefits and costs indicates that the proposed alternative is superior among those evaluated with respect to maximizing net benefits, as shown in the Economic Analysis (USEPA 2003i). The result of the Stage 2 DBPR may include a reduction in reproductive and developmental risk to children and pregnant women and a reduction in cancer risk.

It should also be noted that the LT2ESWTR, which will be implemented at the same time as this proposed rule, provides better controls of pathogens and achieves the goal of increasing microbial drinking water protection for children. The public is invited to submit or identify peer-reviewed studies and data, of which EPA may not be aware that assessed results of early life exposure to DBPs.

H. Executive Order 13211: Actions That Significantly Affect Energy Supply, Distribution, or Use

The proposed Stage 2 DBPR is not a ''significant energy action'' as defined in Executive Order 13211, ''Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use'' (66 FR 28355 (May 22, 2001)) because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. This determination is based on the following analysis.

The first consideration is whether the Stage 2 DBPR would adversely affect the supply of energy. The Stage 2 DBPR does not regulate power generation, either directly or indirectly. The public and private utilities that the Stage 2 DBPR regulates do not, as a rule, generate power. Further, the cost increases borne by customers of water utilities as a result of the Stage 2 DBPR are a low percentage of the total cost of water, except for a very few small systems that might install advanced technologies that must spread that cost over a narrow customer base. Therefore,

the customers that are power generation utilities are unlikely to face any significant effects as a result of the Stage 2 DBPR. In sum, the Stage 2 DBPR does not regulate the supply of energy, does not generally regulate the utilities that supply energy, and is unlikely significantly to affect the customer base of energy suppliers. Thus, the Stage 2 DBPR would not translate into adverse effects on the supply of energy.

The second consideration is whether the Stage 2 DBPR would adversely affect the distribution of energy. The Stage 2 DBPR does not regulate any aspect of energy distribution. The utilities that are regulated by the Stage 2 DBPR already have electrical service. As derived later in this section, the proposed rule is projected to increase peak electricity demand at water utilities by only 0.007 percent. Therefore, EPA estimates that the existing connections are adequate and that the Stage 2 DBPR has no discernable adverse effect on energy distribution.

The third consideration is whether the Stage 2 DBPR would adversely affect the use of energy. Because some drinking water utilities are expected to add treatment technologies that use electrical power, this potential impact is evaluated in more detail. The analyses that underlay the estimation of costs for the Stage 2 DBPR are national in scope and do not identify specific plants or utilities that may install treatment in response to the rule. As a result, no analysis of the effect on specific energy suppliers is possible with the available data. The approach used to estimate the impact of energy use, therefore, focuses on national-level impacts. The analysis estimates the additional energy use due to the Stage 2 DBPR, and compares that to the national levels of power generation in terms of average and peak loads.

The first step in the analysis is to estimate the energy used by the technologies expected to be installed as a result of the Stage 2 DBPR. Energy use is not directly stated in *Technologies and Costs for Control of Microbial Contaminants and Disinfection By-Products* (USEPA 2003k), but the annual cost of energy for each technology addition or upgrade necessitated by the Stage 2 DBPR is provided. An estimate of plant-level energy use is derived by dividing the total energy cost per plant for a range of flows by an average national cost of electricity of $0.076/kilowatt hours per year (kWh/yr) (U.S. Department of Energy, Energy Information Administration (USDOE EIA) 2002). These calculations are shown in detail in Chapter 8 of the *Economic Analysis for the Stage 2 DBPR* (USEPA 2003i). The energy use per plant for each flow range and technology is then multiplied by the number of plants predicted to install each technology in a given flow range. The energy requirements for each flow range are then added to produce a national total. No electricity use is subtracted to account for the technologies that may be replaced by new technologies, resulting in a conservative estimate of the increase in energy use. Table VIII–3 shows the estimated energy use for each Stage 2 DBPR compliance technology in kilowatt hours per year (kWh/yr). The incremental national annual energy usage is 0.08 million megawatt-hours (mWh).

Table VIII-3. Total Increased Annual National Energy Usage Attributable to the Stage 2 DBPR

Technology	Number of Plants Selecting the Technology (a)	Total Increase in Energy Usage as a Result of the Stage 2 DBPR (b)
Chloramines (with and without advanced tech.)	1,719	2,610,918
Chlorine Dioxide	9	37,335
UV	736	11,033,906
Ozone	19	1,545,741
MF/UF	0	1,821
GAC10	-	-
GAC10 + Adv. Disinfectants	18	14,914,955
GAC20	113	24,049,135
GAC20 + Adv. Disinfectants	34	4,366,613
NF	-	-
Membranes	17	17,680,345
TOTAL	**2,667**	**76,240,768**

Notes: Detail may not add due to independent rounding

To determine if the additional energy required for systems to comply with the rule would have a significant adverse effect on the use of energy, the numbers in Table VIII–3 are compared to the national production figures for electricity. According to the U.S. Department of Energy's Information Administration, electricity producers generated 3,800 million mWh of electricity in 2001 (USDOE EIA 2002). Therefore, even using the highest assumed energy use for the Stage 2 DBPR, the rule when fully implemented would result in only a 0.002 percent increase in annual average energy use.

In addition to average energy use, the impact at times of peak power demand is important. To examine whether increased energy usage might significantly affect the capacity margins of energy suppliers, their peak season generating capacity reserve was compared to an estimate of peak

incremental power demand by water utilities.

Both energy use and water use peak in the summer months, so the most significant effects on supply would be seen then. In the summer of 2001, U.S. generation capacity exceeded consumption by 15 percent, or approximately 120,000 mW (USDOE EIA 2002). Assuming around-the-clock operation of water treatment plants, the total energy requirement can be divided by 8,760 hours per year to obtain an average power demand of 8.3 mW. A more detailed derivation of this value is shown in Chapter 8 of the *Economic Analysis for the Stage 2 DBPR* (USEPA 2003i). Assuming that power demand is proportional to water flow through the plant and that peak flow can be as high as twice the average daily flow during the summer months, about 16.6 mW could be needed for treatment technologies installed to comply with the Stage 2 DBPR. This is only 0.014 percent of the capacity margin available at peak use.

Although EPA recognizes that not all areas have a 15 percent capacity margin and that this margin varies across regions and through time, this analysis reflects the effect of the rule on national energy supply, distribution, and use. While certain areas, notably California, have experienced shortfalls in generating capacity in the recent past, a peak incremental power requirement of 16.6 mW nationwide is not likely to significantly change the energy supply, distribution, or use in any given area. Considering this analysis, EPA has concluded that Stage 2 DBPR will not have any significant effect on the use of energy, based on annual average use and on conditions of peak power demand.

I. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act (NTTAA) of 1995, Pub. L. No. 104–113, 12(d) (15 U.S.C. 272 *note*) directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (*e.g.*, materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standard bodies. The NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards.

This proposed rulemaking involves technical standards. EPA proposes to use American Society for Testing and Materials (ASTM) Method D 6581–00 for chlorite, bromide, and bromate compliance monitoring, which can be found in the Annual Book of ASTM Standards Volume 11.01. In the Stage 1 DBPR, EPA approved 13 methods from the Standard Methods Committee for measuring disinfectants, DBPs, and other parameters. Today's rule proposes to add the most recent versions of these 13 methods as approved methods. These consist of Standard Methods 4500–Cl D, 4500–Cl F, 4500–Cl G, 4500–Cl E, 4500–Cl I, 4500–Cl H, 4500–ClO_2 D, 4500–ClO_2 E, 6251 B, 5310 B, 5310 C, 5310 D, and 5910 B for chlorine, chlorine dioxide, HAA5, chlorite, TOC/DOC, and UV_{254}. These methods can be found in the 19th and 20th editions of *Standard Methods for the Examination of Water and Waste Water* (APHA 1995; APHA 1996; APHA 1998). Standard Methods 4500–Cl D, 4500–Cl F, 4500–Cl G, 4500–Cl E, 4500–Cl I, 4500–Cl H, 4500–ClO_2 E, 6251 B, 5310 B, 5310 C, 5310 D, and 5910 B for chlorine, chlorine dioxide, HAA5, chlorite, TOC/DOC, and UV_{254} are also available in the On-Line Version of *Standard Methods for the Examination of Water and Waste Water* (APHA 2003).

EPA welcomes comments on this aspect of the proposed rulemaking and, specifically, invites the public to identify potentially applicable voluntary consensus standards and to explain why such standards should be used in this regulation.

J. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations or Low Income Populations

Executive Order 12898 establishes a Federal policy for incorporating environmental justice into Federal agency missions by directing agencies to identify and address disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations. The Agency has considered environmental justice related issues concerning the potential impacts of this action and consulted with minority and low-income stakeholders.

Two aspects of the Stage 2 DBPR comply with the order that requires the Agency to consider environmental justice issues in the rulemaking and to consult with stakeholders representing a variety of economic and ethnic backgrounds. These are: (1) The overall nature of the rule, and (2) the convening of a stakeholder meeting specifically to address environmental justice issues.

The Stage 1 DBPR has served as a template for the development of the Stage 2 DBPR. As such, the Agency built on the efforts conducted during the development of the Stage 1 DBPR to comply with Executive Order 12898. On March 12, 1998, the Agency held a stakeholder meeting to address various components of pending drinking water regulations and how they might impact sensitive subpopulations, minority populations, and low-income populations. This meeting was a continuation of stakeholder meetings that started in 1995 to obtain input on the Agency's Drinking Water Programs. Topics discussed included treatment techniques, costs and benefits, data quality, health effects, and the regulatory process. Participants were national, State, Tribal, municipal, and individual stakeholders. EPA conducted the meeting by video conference call between eleven cities. The major objectives for the March 12, 1998, meeting were the following:

- Solicit ideas from stakeholders on known issues concerning current drinking water regulatory efforts;
- Identify key areas of concern to stakeholders; and
- Receive suggestions from stakeholders concerning ways to increase representation of communities in OGWDW regulatory efforts.

In addition, EPA developed a plain-English guide for this meeting to assist stakeholders in understanding the multiple and sometimes complex issues surrounding drinking water regulations.

The Stage 2 DBPR and other drinking water regulations promulgated or under development are expected to have a positive effect on human health regardless of the social or economic status of a specific population. The Stage 2 DBPR serves to provide a similar level of drinking water protection to all groups. Where water systems have high DBP levels, they must reduce levels to meet the MCLs. Thus, the Stage 2 DBPR meets the intent of Federal policy requiring incorporation of environmental justice into Federal agency missions.

The Stage 2 DBPR applies uniformly to community water systems and nontransient noncommunity water systems that apply a chemical disinfectant or deliver water that has been chemically disinfected. Consequently, the health protection from DBP exposure that this rule provides is equal across all income and minority groups served by systems regulated by this rule.

K. Consultations with the Science Advisory Board, National Drinking Water Advisory Council, and the Secretary of Health and Human Services

In accordance with sections 1412 (d) and (e) of SDWA, the Agency has consulted with the Science Advisory Board (SAB), the National Drinking Water Advisory Council (NDWAC), and will consult with the Secretary of Health and Human Services regarding the proposed Stage 2 DBPR during the public comment period.

EPA met with the SAB to discuss the Stage 2 DBPR on June 13, 2001 (Washington, DC), September 25–26, 2001 (teleconference), and December 10–12, 2001 (Los Angeles, CA). Written comments from the December 2001 meeting of the SAB addressing the occurrence analysis and risk assessment were generally supportive. EPA met with the NDWAC on November 8, 2001, in Washington, DC to discuss the Stage 2 DBPR proposal. The Advisory Committee generally supported the need for the Stage 2 DBPR based on health and occurrence data, but also stressed the importance of providing flexibility to the systems implementing the rule. The results of these discussions are included in the docket for this rule.

L. Plain Language

Executive Order 12866 encourages Federal agencies to write rules in plain language. EPA invites comments on how to make this proposed rule easier to understand. For example: Has EPA organized the material to suit commenters' needs? Are the requirements in the rule clearly stated? Does the rule contain technical language or jargon that is not clear? Would a different format (grouping and ordering of sections, use of headings, paragraphs) make the rule easier to understand? Could EPA improve clarity by adding tables, lists, or diagrams? What else could EPA do to make the rule easier to understand?

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USEPA 1999d. Cost of Illness Handbook. Office of Pollution Prevention and Toxics. Chapter 1 II.8. Cost of Bladder Cancer. September, 1999. *http://www.epa.gov/oppt/coi*

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USEPA 2000b. Guidelines for Preparing Economic Analyses. Washington, DC. EPA 240R–00–003, September 2000.

USEPA 2000c. *Information Collection Rule Auxiliary 1 Database,* Version 5, EPA 815–C–00–002, April 2000.

USEPA 2000d. EPA Method 321.8. In Methods for the Determination of Organic and Inorganic Compounds in Drinking Water, Volume 1. ORD–NERL, Cincinnati, OH. EPA 815–R–00–014. Available on ORD–NERL Web site at *http://www.epa.gov/nerlcwww/ordmeth.htm.*

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USEPA 2000g. Stage 2 Microbial and Disinfection Byproducts Federal Advisory Committee Agreement in Principle. FR 65:251:83015–83024. (December 29, 2000). *http://www.epa.gov/fedrgstr/EPA–WATER/2000/December/Day-29/w33306.htm*

USEPA 2000h. National Primary Drinking Water Regulations: Ground Water Rule. Proposed Rules. FR 65:91:30194–30274. (May 10, 2000).

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USEPA 2000j. Drinking Water Baseline Handbook, Second Edition. Prepared by International Consultants, Inc. under contract with EPA OGWDW, Standards and Risk Management Division. March 17, 2000.

USEPA 2000k. Geometries and Characteristics of Public Water Systems. Final Report. EPA 815–R–00–024. December 2000.

USEPA 20001. EPA Method 300.1. In Methods for the Determination of Organic and Inorganic Compounds in Drinking Water, Volume 1. OW–OGWDW–TSC, Cincinnati, OH. EPA 815–R–00–014. Available on the OGWDW Web site at *http://www.epa.gov/safewater/methods/sourcalt.html.*

USEPA 2000m. Information Collection Rule Treatment Study Database CD–ROM, Version 1.0.

USEPA 2000n. Science Advisory Board Final Report. Prepared for Environmental Economics Advisory Committee. July 27, 2000. EPA–SAB–EEAC–00–013.

USEPA 2000o. Draft Dioxin Reassessment. EPA/600/P–00/001B *http://cfpub.epa.gov/ncea/cfm/part1and2.cfm?ActType=default.*

USEPA 2001a. Relative Source Contribution for Chloroform. EPA–822-R–01–006.

USEPA 2001b. Toxicological Review of Chloroform. In support of Integrated Risk Information System (IRIS). Washington, DC. Draft. EPA/635/R–01/001.

USEPA 2001c. National Primary Drinking Water Regulations: Filter Backwash Recycling Rule. Final Rule. FR 66:111:31086–31105. (June 8, 2001).

USEPA 2001d. Method 317.0, Revision 2.0. Determination of Inorganic Oxyhalide Disinfection By-Products in Drinking Water Using Ion Chromatography with the Addition of a Postcolumn Reagent for Trace Bromate Analysis. Revision 2.0. EPA 815–B–01–001. (Available on the OGWDW Web site at *http://www.epa.gov/safewater/methods/sourcalt.html.)*

USEPA 2001e. Arsenic Rule Benefits Analysis: an SAB Review. August 30, 2001. EPA–SAB–EC–01–008.

USEPA 2002a. Method 326.0. Determination of Inorganic Oxyhalide Disinfection By-Products in Drinking Water Using Ion Chromatography Incorporating the Addition of a Suppressor Acidified Postcolumn Reagent for Trace Bromate Analysis. Revision 1.0. EPA 815–R–03–007. (Available on the OGWDW Web site at *http://www.epa.gov/safewater/methods/sourcalt.html.)*

USEPA 2002b. Long Term 1 Enhanced Surface Water Treatment Rule. January 14, 2002. 67 FR 1812.

USEPA 2002c. Affordability Criteria for Small Drinking Water Systems: an EPA Science Advisory Board Report. December 2002. EPA–SAB–EEAC–03–004.

USEPA 2003a. Health Risks to Fetuses, Infants, and Children: A Review. Office of Water, Office of Science and Technology, Health and Ecological Criteria Division.

USEPA 2003b. Addendum to the Criteria Document for Monochloroacetic Acid and Trichleoeacetic Acid: External Review Draft.

USEPA 2003c. Addendum to the Criteria Document for Dichloroacetic Acid: External Review Draft.

USEPA 2003d. Drinking Water Criteria Document for Brominated Trihalomethanes: External Review Draft.

USEPA 2003e. Drinking Water Criteria Document for Brominated Haloacetic Acids: External Review Draft.

USEPA 2003f. Drinking Water Criteria Document for Cyanogen Chloride, External Review Draft.

USEPA 2003g. Drinking Water Criteria Document for Glyoxal and Methylglyoxal: External Review Draft.

USEPA 2003h. Drinking Water Criteria Document for Haloacetonitriles: External Review Draft.

USEPA 2003i. Economic Analysis for the Proposed Stage 2 DBPR. Washington, DC. EPA 815–D–03–001.

USEPA 2003j. Draft Initial Distribution System Evaluation Guidance Manual. Washington, DC. EPA 815–D–03–002.

USEPA 2003k. Technologies and Costs for Control of Microbial Pathogens and Disinfection Byproducts. Prepared by the Cadmus Group and Malcolm Pirnie.

USEPA 2003l. Toxicologcal Review for Dichloroacetic Acid: Consensus Review Draft. *http://www.epa.gov/iris/subst/0654.htm*

USEPA 2003m. Information Collection Request. Washington, DC. EPA 815–D–03–003.

USEPA 2003n. Draft Significant Excursion Guidance Manual. Washington, DC. EPA 815–D–03–004.

USEPA 2003o. Stage 2 Occurrence Assessment for Disinfectants and Disinfection Byproducts (D/DBPs). EPA 68–C–99–206.

USEPA 2003p. Method 552.3. Determination of Haloacetic Acids and Dalapon in Drinking Water by Liquid-liquid Extraction, Derivatization, and Gas Chromatography with Electron Capture Detection. Revision 1.0. (Available on the OGWDW Web site at *http://www.epa.gov/safewater/methods/sourcalt.html.)*

USEPA 2003q. Method 327.0. Determination of Chlorine Dioxide and Chlorite Ion in Drinking water Using Lissamine Green B and Horseradish Peroxidase with Detection by Visible Spectrophotometry. Revision 1.0. (Available on the OGWDW Web site at *http://www.epa.gov/safewater/methods/sourcalt.html.)*

USEPA 2003r. Method 415.3. Determination of Total Organic Carbon, and Specific UV Absorbance at 254 nm in Source Water and Drinking Water. Revision 1.0. NERL, Cincinnati, OH 45268.

USEPA 2003s. Arsenic in Drinking Water: Cessation Lag Model. Prepared by Sciences International. Contract No. 68–c–98–195. January, 2003.

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List of Subjects

40 CFR Part 141

Chemicals, Indians-lands, Intergovernmental relations, Radiation protection, Reporting and recordkeeping requirements, Water supply.

40 CFR Part 142

Administrative practice and procedure, Chemicals, Indians-lands, Radiation protection, Reporting and recordkeeping requirements, Water supply.

40 CFR Part 143

Chemicals, Indians-lands, Water supply.

Dated: July 11, 2003.

Linda J. Fisher,

Acting Administrator.

For the reasons set forth in the preamble, title 40 chapter I of the Code of Federal Regulations is proposed to be amended as follows:

PART 141—NATIONAL PRIMARY DRINKING WATER REGULATIONS

1. The authority citation for part 141 continues to read as follows:

Authority: 42 U.S.C. 300f, 300g–1, 300g–2, 300g–3, 300g–4, 300g–5, 300g–6, 300j–4, 300j–9, and 300j–11.

2. Section 141.2 is amended by adding, in alphabetical order, definitions for ''Combined distribution system'', ''Consecutive system'', ''Consecutive system entry point'', ''Dual sample sets'', ''Finished water'', ''Locational running annual average'', and ''Wholesale system'' to read as follows:

§ 141.2 Definitions.

* * * * *

Combined distribution system is the interconnected distribution system consisting of the distribution systems of wholesale systems and of the consecutive systems that receive finished water from those wholesale system(s).

* * * * *

Consecutive system is a public water system that buys or otherwise receives some or all of its finished water from one or more wholesale systems, for at least 60 days per year.

Consecutive system entry point is a location at which finished water is delivered at least 60 days per year from a wholesale system to a consecutive system.

* * * * *

Dual sample set is a set of two samples collected at the same time and same location, with one sample analyzed for TTHM and the other sample analyzed for HAA5. Dual sample sets are collected for the purposes of conducting an IDSE under subpart U of this part and determining compliance with the TTHM and HAA5 MCLs under subpart V of this part.

* * * * *

Finished water is water that is introduced into the distribution system of a public water system and is intended for distribution without further treatment, except that necessary to maintain water quality.

* * * * *

Locational running annual average (LRAA) is the average of sample analytical results for samples taken at a particular monitoring site during the previous four calendar quarters.

* * * * *

Stage 2A is the period beginning [date three years following publication of the final rule] until the dates specified in subpart V of this part for compliance with Stage 2B, during which systems must comply with Stage 2A MCLs in § 141.64(b)(2).

* * * * *

Wholesale system is a public water system that treats source water and then sells or otherwise delivers finished water to another public water system for at least 60 days per year. Delivery may be through a direct connection or through the distribution system of one or more consecutive systems.

3. In § 141.23, the table in paragraph (k)(1) is amended by revising entries 13, 18, 19, and 20; revising the undesignated text after the table; and adding a new footnote 19 to read as follows:

§ 141.23 Inorganic chemical sampling and analytical requirements.

* * * * *

(k) Inorganic analysis:

* * * * *

Contaminant and methodology [13]	EPA	ASTM [3]	SM [4] (18th, 19th ed.)	SM [4] (20th ed.)	Other
* * *		*	*	*	*
13. Fluoride:					
Ion Chromatography	[6] 300.0 [19] 300.1	D4327–97	4110 B	4110 B	
Manual Distill.; Color. SPADNS.	.....	.	4500–F B, D	4500–F B, D	
Manual Electrode	.....	D1179–93B	4500–F C	4500–F C	
Automated Electrode	.....	.	.	.	380–75WE [11]
Automated Alizarin	.....	.	4500–F E	4500–F E	129–71W [11]
* * *		*	*	*	*
18. Nitrate:					
Ion Chromatography	[6] 300.0 [19] 300.1	D4327–97	4110 B	4110 B	B1011 [8]
Automated Cadmium Reduction	[6] 353.2	D3867–90A	4500–NO_3 F	4500–NO_3 F	
Ion Selective Electrode	.....	.	4500–NO_3 D	4500–NO_3 D	601 [7]
Manual Cadmium Reduction	.....	D3867–90B	4500–NO_3 E	4500–NO_3 E	
19. Nitrite:					
Ion Chromatography	[6] 300.0 [19] 300.1	D4327–97	4110 B	4110 B	B–1011 [8]
Automated Cadmium Reduction	[6] 353.2	D3867–90A	4500–NO_3 F	4500–NO_3 F	
Manual Cadmium Reduction	.....	D3867–90B	4500–NO_3 E	4500–NO_3 E	
Spectrophotometric	.....		4500–NO_2 B	4500–NO_2 B	
20. Orthophosphate: [12]					

Contaminant and methodology [13]	EPA	ASTM [3]	SM [4] (18th, 19th ed.)	SM [4] (20th ed.)	Other
Colorimetric, automated, ascorbic acid	[6]365.1	.	4500–P F	4500–P F	
Colorimetric, ascorbic acid, single reagent	.....	D515–88A	4500–P E	4500–P E	
Colorimetric, phosphomolybdate	.....	.	.	.	I–1601–85[5]
Automated–segmented flow	.....	.	.	.	I–2601–90[5]
Automated discrete	.....	.	.	.	I–2598–85[5]
Ion Chromatography	[6]300.0 [19]300.1	D4327–97	4110 B	4110 B	
*	*	*	*	*	*

Note: The procedures shall be done in accordance with the documents listed below. The incorporation by reference of the following documents listed in footnotes 1–11 and 16–19 was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies of the documents may be obtained from the sources listed below. Information regarding obtaining these documents can be obtained from the Safe Drinking Water Hotline at 800–426–4791. Documents may be inspected at EPA's Drinking Water Docket, EPA West, 1301 Constitution Avenue NW., Room B102, Washington, DC 20460 (Telephone: 202–566–2426); or at the Office of the Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC.

* * * * * * *

[3] *Annual Book of ASTM Standards*, 1994, 1996, or 1999, Vols. 11.01 and 11.02, ASTM International; any year containing the cited version of the method may be used. The previous versions of D1688–95A, D1688–95C (copper), D3559–95D (lead), D1293–95 (pH), D1125–91A (conductivity) and D859–94 (silica) are also approved. These previous versions D1688–90A, C; D3559–90D, D1293–84, D1125–91A and D859–88, respectively are located in the Annual Book of ASTM Standards, 1994, Vol. 11.01. Copies may be obtained from ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428.

[4] *Standard Methods for the Examination of Water and Wastewater*, 18th edition (1992), 19th edition (1995), or 20th edition (1998). American Public Health Association, 1015 Fifteenth Street, NW, Washington, DC 20005. The cited methods published in any of these three editions may be used, except that the versions of 3111 B, 3111 D, 3113 B and 3114 B in the 20th edition may not be used.

[5] Method I–2601–90, Methods for Analysis by the U.S. Geological Survey National Water Quality Laboratory—Determination of Inorganic and Organic Constituents in Water and Fluvial Sediment, Open File Report 93–125, 1993; For Methods I–1030–85; I–1601–85; I–1700–85; I–2598–85; I–2700–85; and I–3300–85 See Techniques of Water Resources Investigation of the U.S. Geological Survey, Book 5, Chapter A–1, 3rd ed., 1989; Available from Information Services, U.S. Geological Survey, Federal Center, Box 25286, Denver, CO 80225–0425.

[6] ''Methods for the Determination of Inorganic Substances in Environmental Samples'', EPA/600/R–93/100, August 1993. Available at NTIS, PB94–120821.

[7] The procedure shall be done in accordance with the Technical Bulletin 601 ''Standard Method of Test for Nitrate in Drinking Water'', July 1994, PN 221890–001, Analytical Technology, Inc. Copies may be obtained from ATI Orion, 529 Main Street, Boston, MA 02129.

[8] Method B–1011, ''Waters Test Method for Determination of Nitrite/Nitrate in Water Using Single Column Ion Chromatography,'' August 1987. Copies may be obtained from Waters Corporation, Technical Services Division, 34 Maple Street, Milford, MA 01757.

* * * * * * *

[11] Industrial Method No. 129–71W, ''Fluoride in Water and Wastewater'', December 1972, and Method No. 380–75WE, ''Fluoride in Water and Wastewater'', February 1976, Technicon Industrial Systems. Copies may be obtained from Bran & Luebbe, 1025 Busch Parkway, Buffalo Grove, IL 60089.

[12] Unfiltered, no digestion or hydrolysis.

[13] Because MDLs reported in EPA Methods 200.7 and 200.9 were determined using a 2X preconcentration step during sample digestion, MDLs determined when samples are analyzed by direct analysis (*i.e.*, no sample digestion) will be higher. For direct analysis of cadmium and arsenic by Method 200.7, and arsenic by Method 3120 B sample preconcentration using pneumatic nebulization may be required to achieve lower detection limits. Preconcentration may also be required for direct analysis of antimony, lead, and thallium by Method 200.9; antimony and lead by Method 3113 B; and lead by Method D3559–90D unless multiple in-furnace depositions are made.

* * * * * * *

[19] ''Methods for the Determination of Organic and Inorganic Compounds in Drinking Water'', Vol. 1, EPA 815–R–00–014, August 2000. Available at NTIS, PB2000–106981.

* * * * *

4. Section 141.24 is amended by revising paragraph (e)(1) and by revising entry 30 in the table in paragraph (e)(1) to read as follows:

§ 141.24 Organic chemicals, sampling and analytical requirements.

* * * * *

(e) * * *

(1) The following documents are incorporated by reference. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR Part 51. Copies may be inspected at EPA's Drinking Water Docket, 1301 Constitution Avenue, NW., EPA West, Room B102, Washington, DC 20460 (Telephone: 202–566–2426); or at the Office of the Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC. Method 508A and 515.1 are in *Methods for the Determination of Organic Compounds in Drinking Water*, EPA/600/4–88–039, December 1988, Revised, July 1991. Methods 547, 550 and 550.1 are in *Methods for the Determination of Organic Compounds in Drinking Water—Supplement I*, EPA/600–4–90–020, July 1990. Methods 548.1, 549.1, 552.1 and 555 are in *Methods for the Determination of Organic Compounds in Drinking Water—Supplement II*, EPA/600/R–92–129, August 1992. Methods 502.2, 504.1, 505, 506, 507, 508, 508.1, 515.2, 524.2 525.2, 531.1, 551.1 and 552.2 are in *Methods for the Determination of Organic Compounds in Drinking Water—Supplement III*, EPA/600/R–95–131, August 1995. Method 1613 is titled ''Tetra-through Octa-Chlorinated Dioxins and Furans by Isotope-Dilution HRGC/HRMS'', EPA/821–B–94–005, October 1994. These documents are available from the National Technical Information Service, NTIS PB91–231480, PB91–146027, PB92–207703, PB95–261616 and PB95–104774, U.S. Department of Commerce, 5285 Port Royal Road, Springfield, Virginia 22161. The toll-free number is 800–553–6847. Method 6651 shall be followed in accordance with *Standard Methods for the Examination of Water and Wastewater*, 18th edition (1992), 19th edition (1995), or 20th edition (1998), American Public Health Association (APHA); any of these three editions may be used. Method 6610 shall be followed in accordance with *Standard Methods for the Examination of Water and Wastewater, (18th Edition Supplement)* (1994), or with the 19th edition (1995) or 20th edition (1998) of *Standard Methods for the Examination of Water and Wastewater*; any of these publications may be used. The APHA documents are available from APHA, 1015 Fifteenth Street NW., Washington, D.C. 20005. Other required analytical test procedures germane to the conduct

of these analyses are contained in *Technical Notes on Drinking Water Methods*, EPA/600/R–94–173, October 1994, NTIS PB95–104766. EPA Methods 515.3 and 549.2 are available from U.S. Environmental Protection Agency, National Exposure Research Laboratory (NERL)—Cincinnati, 26 West Martin Luther King Drive, Cincinnati, OH 45268. ASTM Method D 5317–93 is available in the *Annual Book of ASTM Standards*, (1999), Vol. 11.02, ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428, or in any edition published after 1993. EPA Method 515.4, ''Determination of Chlorinated Acids in Drinking Water by Liquid-Liquid Microextraction, Derivatization and Fast Gas Chromatography with Electron Capture Detection,'' Revision 1.0, April 2000, EPA/815/B–00/001 and EPA Method 552.3, ''Determination of Haloacetic Acids and Dalapon in Drinking Water by Liquid-Liquid Microextraction, Derivatization, and Gas Chromatography with Electron Capture Detection,'' Revision 1.0, July 2003 can be accessed and downloaded directly on-line at *http://www.epa.gov/safewater/methods/sourcalt.html*. The Syngenta AG–625, ''Atrazine in Drinking Water by Immunoassay'', February 2001 is available from Syngenta Crop Protection, Inc., 410 Swing Road, Post Office Box 18300, Greensboro, NC 27419, Phone number (336) 632–6000. Method 531.2 ''Measurement of N-methylcarbamoyloximes and N-methylcarbamates in Water by Direct Aqueous Injection HPLC with Postcolumn Derivatization,'' Revision 1.0, September 2001, EPA 815/B/01/002 can be accessed and downloaded directly on-line at *http://www.epa.gov/safewater/methods/sourcalt.html*.

Contaminant	EPA method [1]	Standard methods	ASTM	Other
* * *	*	*	*	*
30. Dalapon	552.1, 515.1, 552.2, 515.3, 515.4, 552.3			
* * *	*	*	*	*

[1] For previously approved EPA methods which remain available for compliance monitoring until June 1, 2001, *see* paragraph (e)(2) of this section.

* * * * *

5. Section 141.33 is amended by revising the first sentence of paragraph (a) introductory text, and adding paragraph (f) to read as follows:

§ 141.33 Record maintenance.

* * * * *

(a) Records of microbiological analyses and turbidity analyses made pursuant to this part shall be kept for not less than 5 years. * * *

* * * * *

(f) Copies of monitoring plans developed pursuant to this part shall be kept for the same period of time as the records of analyses are required to be kept under paragraph (a) of this section or for three years after modification, whichever is longer.

6. Section 141.53 is amended by revising the table to read as follows:

§ 141.53 Maximum contaminant level goals for disinfection byproducts.

* * * * *

Disinfection byproduct	MCLG (mg/L)
Bromodichloromethane	zero.
Bromoform	zero.
Bromate	zero.
Chlorite	0.8
Chloroform	0.07
Dibromochloromethane	0.06
Dichloroacetic acid	zero.
Monochloroacetic acid	0.03
Trichloroacetic acid	0.02

7. Section 141.64 is revised to read as follows:

§ 141.64 Maximum contaminant levels for disinfection byproducts.

(a) *Bromate and chlorite.* The maximum contaminant levels (MCLs) for bromate and chlorite are as follows:

Disinfection byproduct	MCL (mg/L)
Bromate	0.010
Chlorite	1.0

(1) *Compliance dates for CWSs and NTNCWSs.* Subpart H systems serving 10,000 or more persons must comply with this paragraph (a) beginning January 1, 2002. Subpart H systems serving fewer than 10,000 persons and systems using only ground water not under the direct influence of surface water must comply with this paragraph (a) beginning January 1, 2004.

(2) *Best available technology.* The Administrator, pursuant to section 1412 of the Act, hereby identifies the following as the best technology, treatment techniques, or other means available for achieving compliance with the maximum contaminant levels for bromate and chlorite identified in this paragraph (a):

Disinfection byproduct	Best available technology
Bromate	Control of ozone treatment process to reduce production bromate.
Chlorite	Control of treatment processes to reduce disinfectant demand and control of disinfection treatment processes to reduce disinfectant levels.

(b) *TTHM and HAA5.*

(1) *Subpart L—RAA compliance. (i) Compliance dates.* Subpart H systems serving 10,000 or more persons must comply with this paragraph (b)(1) beginning January 1, 2002 until the date specified for subpart V of this part compliance in § 141.620(c). Subpart H systems serving fewer than 10,000 persons and systems using only ground water not under the direct influence of surface water must comply with this paragraph (b)(1) beginning January 1, 2004 until the date specified for subpart V of this part compliance in § 141.620(c).

Disinfection byproduct	MCL (mg/L)
Total trihalomethanes (TTHM)	0.080
Haloacetic acids (five) (HAA5)	0.060

(ii) *Best available technology.* The Administrator, pursuant to section 1412 of the Act, hereby identifies the following as the best technology, treatment techniques, or other means

available for achieving compliance with the maximum contaminant levels for TTHM and HAA5 identified in this paragraph (b)(1):

Disinfection byproduct	Best available technology
Total trihalomethanes (TTHM) and Halaocetic acids (five) (HAA5).	Enhanced coagulation or enhanced softening or GAC10, with chlorine as the primary and residual disinfectant.

(2) *Stage 2A—LRAA compliance. (i) Compliance dates.* The Stage 2A MCLs for TTHM and HAA5 must be complied with as a locational running annual average at each subpart L of this part compliance monitoring location under § 141.136 beginning [date three years after publication of the final rule] until the date specified for subpart V of this part compliance in § 141.620(c).

Disinfection byproduct	MCL (mg/L)
Total trihalomethanes (TTHM)	0.120
Haloacetic acids (five) (HAA5)	0.100

(ii) *Best available technology.* The Administrator, pursuant to section 1412 of the Act, hereby identifies the following as the best technology, treatment techniques, or other means available for achieving compliance with the maximum contaminant levels for TTHM and HAA5 identified in this paragraph (b)(2):

Disinfection byproduct	Best available technology
Total trihalomethanes (TTHM) and Haloacetic acids (five) (HAA5).	Enhanced coagulation or enhanced softening or GAC10, with chlorine as the primary and residual disinfectant.

(3) *Subpart V LRAA compliance. (i) Compliance dates.* The subpart V of this part MCLs for TTHM and HAA5 must be complied with as a locational running annual average at each monitoring location beginning the date specified for Subpart V of this part compliance in § 141.620(c).

Disinfection byproduct	MCL (mg/L)
Total trihalomethanes (TTHM)	0.080
Haloacetic acids (five) (HAA5)	0.060

(ii) *Best technology for systems that disinfect their source water.* The Administrator, pursuant to section 1412 of the Act, hereby identifies the following as the best technology, treatment techniques, or other means available for achieving compliance with the maximum contaminant levels for TTHM and HAA5 identified in this paragraph (b)(3) for all systems that disinfect their source water:

Disinfection byproduct	Best available technology
Total trihalomethanes (TTHM) and Haloacetic acids (five) (HAA5).	Enhanced coagulation or enhanced softening, plus GAC10; or nanofiltration with a molecular weight and cutoff ≤1000 Daltons; or GAC20.

(iii) *Best available technology for systems that buy disinfected water.* The Administrator, pursuant to section 1412 of the Act, hereby identifies the following as the best technology, treatment techniques, or other means available for achieving compliance with the maximum contaminant levels for TTHM and HAA5 identified in this paragraph (b)(3) for systems that buy disinfected water:

Disinfection byproduct	Best available technology
Total trihalomethanes (TTHM) and Haloacetic acids (five) (HAA5).	Improved distribution system and storage tank management to reduce detention time plus the use of chloramines for disinfectant residual maintenance.

(c) *Extensions.* A system that is installing GAC or membrane technology to comply with the MCLs in paragraphs (a) or (b)(1) of this section may apply to the State for an extension of up to 24 months past January 1, 2002, but not beyond January 1, 2004. In granting the extension, States must set a schedule for compliance and may specify any interim measures that the system must take. Failure to meet the schedule or any interim treatment requirements constitutes a violation of a National Primary Drinking Water Regulation.

Subpart L—[Amended]

8. Section 141.131 is amended by revising paragraphs (a), (b), (d)(2), (d)(3), (d)(4)(i), (d)(4)(ii), and the table in paragraph (c)(1), and adding paragraph (d)(6) to read as follows:

§ 141.131 Analytical requirements.

(a) *General.* (1) Systems must use only the analytical methods specified in this section, or their equivalent as approved by EPA, to demonstrate compliance with the requirements of this subpart and with the requirements of subparts U and V. These methods are effective for compliance monitoring February 16, 1999, unless a different effective date is specified in this section or by the State.

(2) The following documents are incorporated by reference. The Director of the Federal Register approves this incorporation by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be inspected at EPA's Drinking Water Docket, 1301 Constitution Avenue, NW., EPA West, Room B102, Washington, DC 20460, or at the Office of the Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC. EPA Method 552.1 is in *Methods for the Determination of Organic Compounds in Drinking Water-Supplement II,* USEPA, August 1992, EPA/600/R–92/129 (available through National Information Technical Service (NTIS), PB92–207703). EPA Methods 502.2, 524.2, 551.1, and 552.2 are in *Methods for the Determination of Organic Compounds in Drinking Water-Supplement III,* USEPA, August 1995, EPA/600/R–95/131. (Available through NTIS, PB95–261616). EPA Method 300.0 for chlorite and bromide is in *Methods for the Determination of Inorganic Substances in Environmental Samples,* USEPA, August 1993, EPA/600/R–93/100 (available through NTIS, PB94–121811). EPA Methods 300.1 for chlorite, bromate, and bromide and 321.8 for bromate are in *Methods for the Determination of Organic and Inorganic Compounds in Drinking Water, Volume 1,* USEPA, August 2000, EPA 815–R–00–014 (available through NTIS, PB2000–106981). EPA Method 317.0, Revision 2.0, ''Determination of Inorganic Oxyhalide Disinfection By-Products in Drinking Water Using Ion Chromotography with the Addition of a Postcolumn Reagent for Trace Bromate Analysis,'' USEPA, July 2001, EPA 815–B–01–001, EPA Method 326.0, Revision 1.0, ''Determination of Inorganic Oxyhalide Disinfection By-Products in Drinking Water Using Ion Chromatography Incorporating the Addition of a Suppressor Acidified Postcolumn Reagent for Trace Bromate Analysis,'' USEPA, June 2002, EPA 815–R–03–007, EPA Method 327.0, Revision 1.0, ''Determination of Chlorine Dioxide and Chlorite Ion in Drinking Water Using Lissamine Green B and Horseradish Peroxidase with Detection by Visible Spectrophotometry,'' USEPA, July 2003, and EPA Method 552.3, Revision 1.0, ''Determination of Haloacetic Acids and Dalapon in Drinking Water by Liquid-liquid Extraction, Derivatization, and Gas Chromatography with Electron Capture Detection,'' USEPA, July 2003, can be

accessed and downloaded directly on-line at *www.epa.gov/safewater/methods/sourcalt.html.* EPA Method 415.3, Revision 1.0, ''Determination of Total Organic Carbon and Specific UV Absorbance at 254 nm in Source Water and Drinking Water,'' USEPA, June 2003, is available from: Chemical Exposure Research Branch, Microbiological & Chemical Exposure Assessment Research Division, National Exposure Research Laboratory, U.S. Environmental Protection Agency, Cincinnati, OH 45268, Fax Number 513–569–7757, Phone number: 513–569–7586. Standard Methods 4500–Cl D, 4500–Cl E, 4500–Cl F, 4500–Cl G, 4500–Cl H, 4500–Cl I, 4500–ClO_2 E, 6251 B, and 5910 B shall be followed in accordance with *Standard Methods for the Examination of Water and Wastewater, 19th or 20th Editions or the On-Line Version,* American Public Health Association, 1995, 1998, and 2003, respectively. The cited methods published in any of these three editions may be used. Standard Method 4500–ClO_2 D shall be followed in accordance with *Standard Methods for the Examination of Water and Wastewater, 19th or 20th Editions,* American Public Health Association, 1995 and 1998, respectively. Standard Methods 5310 B, 5310 C, and 5310 D shall be followed in accordance with the *Supplement to the 19th Edition of Standard Methods for the Examination of Water and Wastewater,* or the *Standard Methods for the Examination of Water and Wastewater, 20th Edition,* or *the On-Line Version,* American Public Health Association, 1995, 1998, and 2003, respectively. The cited methods published in any of these editions may be used. Copies may be obtained from the American Public Health Association, 1015 Fifteenth Street, NW., Washington, DC 20005. ASTM Method D 1253–86 shall be followed in accordance with the *Annual Book of ASTM Standards,* Volume 11.01, American Society for Testing and Materials, 1996 or any year containing the cited version of the method may be used. ASTM D 6581–00 shall be followed in accordance with the *Annual Book of ASTM Standards,* Volume 11.01, American Society for Testing and Materials, 2001 or any year containing the cited version of the method may be used; copies may be obtained from the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohoken, PA 19428–2959.

(b) *Disinfection byproducts.* (1) Systems must measure disinfection byproducts by the methods (as modified by the footnotes) listed in the following table:

APPROVED METHODS FOR DISINFECTION BYPRODUCT COMPLIANCE MONITORING

Contaminant and methodology [1]	EPA method	Standard Method [2]	ASTM Method [3]
TTHM:			
P&T/GC/ElCD & PID	502.2 [4]		
P&T/GC/MS	524.2		
LLE/GC/ECD	551.1		
HAA5:			
LLE (diazomethane)/GC/ECD		6251 B [5].	
SPE (acidic methanol)/GC/ECD	552.1 [5]		
LLE (acidic methanol)/GC/ECD	552.2, 552.3.		
Bromate:			
Ion chromatography	300.1	.....	D 6581–00
Ion chromatography & post column reaction	317.0 Rev 2.0 [6], 326.0 [6]		
IC/ICP–MS	321.8 [6, 7]		
Chlorite:			
Amperometric titration		4500–ClO_2 E [8].	
Spectrophotometry	327.0 [8].	.	
Ion chromatography	300.0, 300.1, 317.0 Rev. 2.0, 326.0	.....	D 6581–00

[1] P&T = purge and trap; GC = gas chromatography; ElCD = electrolytic conductivity detector; PID = photoionization detector; MS = mass spectrometer; LLE = liquid/liquid extraction; ECD = electron capture detector; SPE = solid phase extraction; IC = ion chromatography; ICP-MS = inductively coupled plasma/mass spectrometer

[2] 219th or 20th editions or the On-Line Version of *Standard Methods for the Examination of Water and Wastewater,* 1995, 1998, and 2003, respectively, American Public Health Association; any of these editions may be used.

[3] *Annual Book of ASTM Standards,* 2001 or any year containing the cited version of the method, Vol 11.01.

[4] If TTHMs are the only analytes being measured in the sample, then a PID is not required.

[5] The samples must be extracted within 14 days of sample collection.

[6] Ion chromatography & post column reaction or IC/ICP-MS must be used for monitoring of bromate for purposes of demonstrating eligibility of reduced monitoring, as prescribed in § 141.132(b)(3)(ii).

[7] Samples must be preserved at the time of sampling with 50 mg ethylenediamine (EDA)/L of sample and must be analyzed within 28 days.

[8] Amperometric titration or spectrophotometry may be used for routine daily monitoring of chlorite at the entrance to the distribution system, as prescribed in § 141.132(b)(2)(i)(A). Ion chromatography must be used for routine monthly monitoring of chlorite and additional monitoring of chlorite in the distribution system, as prescribed in § 141.132(b)(2)(i)(B) and (b)(2)(ii).

(2) Analysis under this section for disinfection byproducts must be conducted by laboratories that have received certification by EPA or the State, except as specified under paragraph (b)(3)of this section. To receive certification to conduct analyses for the DBP contaminants in §§ 141.64, 141.135, and subparts U and V of this part, the laboratory must:

(i) Analyze Performance Evaluation (PE) samples that are acceptable to EPA or the State at least once during each consecutive 12 month period by each method for which the laboratory desires certification.

(ii) Achieve quantitative results on the PE sample analyses that are within the following acceptance limits which become effective [date 60 days after date of final rule publication] for purposes of certification:

DBP	Acceptance limits (percent)	Comments
TTHM:		
Chloroform	±20	Laboratory must meet all 4 individual THM acceptance limits in order to successfully pass a PE sample for TTHM.
Bromodichloromethane	±20	
Dibromochloromethane	±20	
Bromoform	±20	
HAA5:		
Monochloroacetic Acid	±40	Laboratory must meet the acceptance limits for 4 out of 5 of the HAAS compounds in order to successfully pass a PE sample for HAA5.
Dichloroacetic Acid	±40	
Trichloroacetic Acid	±40	
Monobromacetic Acid	±40	
Dibromoacetic Acid	±40	
Chlorite	±30	
Bromate	±30	

(iii) Report quantitative data for concentrations at least as low as the ones listed in the following table for all DBP samples analyzed for compliance with §§ 141.64, 141.135, 141.136, and subparts U and V of this part:

DBP	Minimum reporting level (ug/L) [7]	Comments
TTHM [2]:		
Chloroform	1.0	
Bromodichloromethane	1.0	
Dibromochloromethane	1.0	
Bromoform	1.0	
HAA5: [2]		
Monochloroacetic Acid	2.0	
Dichloroacetic Acid	1.0	
Trichloroacetic Acid	1.0	
Monobromoacetic Acid	1.0	
Dibromoacetic Acid	1.0	
Chlorite	200.	
Bromate	5.0 or 1.0	Laboratories that use EPA Methods 317.0 Revision 2.0, 326.0 or 321.8 must meet a 1.0 μg/L MRL for bromate.

[1] The calibration curve must encompass the minimum reporting level (MRL) concentration and the laboratory must verify the accuracy of the calibration curve at the lowest concentration for which quantitative data are reported by analyzing a calibration check standard at that concentration at the beginning of each batch of samples. The measured concentration for the check standard must be within ±50% of the expected value. Data may be reported for concentrations lower than the MRL as long as the precision and accuracy criteria are met by analyzing a standard at the lowest reporting limit chosen by the laboratory.

[2] When adding the individual trihalomethane or haloacetic acid concentrations to calculate the TTHM or HAA5 concentrations, respectively, a zero is used for any analytical result that is less than the MRL concentration for that DBP.

(3) A party approved by EPA or the State must measure daily chlorite samples at the entrance to the distribution system.

(c) * * *

(1) * * *

Methodology	Standard method	ASTM method	EPA method	Residual Measured [1]			
				Free chlorine	Combined chlorine	Total chlorine	Chlorine dioxide
Amperometric Titration	4500–Cl D	D 1253–86		X	X	X	
Low Level Amperometric Titration	4500–Cl E					X	
DPD Ferrous Titrimetric	4500–Cl F			X	X	X	
DPD Colorimetric	4500–Cl G			X	X	X	
Syringaldazine (FACTS)	4500–Cl			X			
Iodometric Electrode	4500–Cl					X	
DPD	4500–ClO_2						X
Amperometric Method II	4500–ClO_2 E						X
Lissamine Green Spectrophotometric			327.0				X

[1] X indicates method is approved for measuring specified disinfectant residual. Free chlorine or total chlorine may be measured for demonstrating compliance with the chlorine MRDL and combined chlorine or total chlorine may be measured for demonstrating compliance with the chloramine MRDL.

* * * * *

(d) * * *

(2) *Bromide.* EPA Methods 300.0, 300.1, 317.0 Revision 2.0, 326.0, or ASTM D 6581–00.

(3) *Total Organic Carbon (TOC).* Standard Method 5310 B (High-Temperature Combustion Method) or Standard Method 5310 C (Persulfate-Ultraviolet or Heated-Persulfate Oxidation Method) or Standard Method 5310 D (Wet-Oxidation Method) or EPA Method 415.3. Inorganic carbon must be removed from the samples prior to analysis. TOC samples may not be filtered prior to analysis. TOC samples must be acidified at the time of sample collection to achieve pH less than or equal to 2 with minimal addition of the acid specified in the method or by the instrument manufacturer. Acidified TOC samples must be analyzed within 28 days.

(4) * * *

(i) Dissolved Organic Carbon (DOC). Standard Method 5310 B (High-Temperature Combustion Method) or Standard Method 5310 C (Persulfate-Ultraviolet or Heated-Persulfate Oxidation Method) or Standard Method 5310 D (Wet-Oxidation Method) or EPA Method 415.3. DOC samples must be filtered through the 0.45 µm pore-diameter filter as soon as practical after sampling, not to exceed 48 hours. After filtration, DOC samples must be acidified to achieve pH less than or equal to 2 with minimal addition of the acid specified in the method or by the instrument manufacturer. Acidified DOC samples must be analyzed within 28 days. Inorganic carbon must be removed from the samples prior to analysis. Water passed through the filter prior to filtration of the sample must serve as the filtered blank. This filtered blank must be analyzed using procedures identical to those used for analysis of the samples and must meet the following criteria: DOC < 0.5 mg/L.

(ii) Ultraviolet Absorption at 254 nm (UV_{254}). Standard Method 5910 B (Ultraviolet Absorption Method) or EPA Method 415.3. UV absorption must be measured at 253.7 nm (may be rounded off to 254 nm). Prior to analysis, UV_{254} samples must be filtered through a 0.45 µm pore-diameter filter. The pH of UV_{254} samples may not be adjusted. Samples must be analyzed as soon as practical after sampling, not to exceed 48 hours.

* * * * *

(6) *Magnesium.* All methods allowed in § 141.23(k)(1) for measuring magnesium.

9. Section 141.132 is amended by revising paragraphs (b)(3)(ii) and (e) to read as follows:

§ 141.132 Monitoring requirements.

* * * * *

(b) * * *

(i) * * *

(ii) *Reduced monitoring.*

(A) Until [date three years from final rule publication], systems required to analyze for bromate may reduce monitoring from monthly to quarterly, if the system's average source water bromide concentration is less than 0.05 mg/L based on representative monthly bromide measurements for one year. The system may remain on reduced bromate monitoring until the running annual average source water bromide concentration, computed quarterly, is equal to or greater than 0.05 mg/L based on representative monthly measurements. If the running annual average source water bromide concentration is ≥0.05 mg/L, the system must resume routine monitoring required by paragraph (b)(3)(i) of this section.

(B) Beginning [date three years from final rule publication], systems may no longer use the provisions of paragraph (b)(3)(ii)(A) of this section to qualify for reduced monitoring. A system required to analyze for bromate may reduce monitoring from monthly to quarterly, if the system's running annual average bromate concentration is less than 0.0025 mg/L based on monthly bromate measurements under paragraph (b)(3)(i) of this section for the most recent four quarters, with samples analyzed using Method 317.0 Revision 2.0, 325.0 or 321.8. If a system has qualified for reduced bromate monitoring under paragraph (b)(3)(ii)(A) of this section, that system may remain on reduced monitoring as long as the running annual average of quarterly bromate samples does not exceed 0.0025 mg/L based on samples analyzed using Method 317.0 Revision 2.0, 325.0, or 321.8. If the running annual average bromate concentration is >0.0025 mg/L, the system must resume routine monitoring required by paragraph (b)(3)(i) of this section.

* * * * *

(e) *Monitoring requirements for source water TOC.* In order to qualify for reduced monitoring for TTHM and HAA5 under paragraph (b)(1)(ii) of this section, subpart H systems not monitoring under the provisions of paragraph (d) of this section must take monthly TOC samples approximately every 30 days at a location prior to any treatment. In addition to meeting other criteria for reduced monitoring in paragraph (b)(1)(ii) of this section, the source water TOC running annual average must be ≤4.0 mg/L (based on the most recent four quarters of monitoring) on a continuing basis at each treatment plant to reduce or remain on reduced monitoring for TTHM and HAA5.

* * * * *

10. Section 141.134 is amended by revising paragraph (b) introductory text to read as follows:

§ 141.134 Reporting and recordkeeping requirements.

* * * * *

(b) *Disinfection byproducts.* In addition to reporting required under § 141.136(e), systems must report the information specified in the following table:

* * * * *

11. Section 141.135 is amended by revising paragraph (a)(3)(ii) to read as follows:

§ 141.135 Treatment technique for control of disinfection byproduct (DBP) precursors.

(a) * * *

(3) * * *

(ii) Softening that results in removing at least 10 mg/L of magnesium hardness (as $CaCO_3$), measured monthly according to § 141.131(d)(6) and calculated quarterly as a running annual average.

* * * * *

12. Section 141.136 is added to subpart L to read as follows:

§ 141.136 Additional compliance requirements for Stage 2A.

(a) *Applicability.* Any system that takes TTHM and HAA5 compliance samples under this subpart at more than one location in its distribution system is subject to additional MCL requirements beginning [date 3 years after publication of final rule] until the dates identified for compliance with subpart V in § 141.620(c). Any system that takes samples at more than one location must calculate a locational running annual average (LRAA) for each sampling point and comply with the MCLs of 0.120 mg/L for TTHM and 0.100 mg/L for HAA5 listed in § 141.64(b)(2), except as provided for under paragraph (c) of this section.

(b) *Compliance.* (1) Systems must calculate a locational running annual average each quarter for each monitoring location at which they took TTHM and HAA5 samples under their monitoring plan developed under § 141.132(f) by averaging the results of TTHM or HAA5 monitoring at that sample location during the four most recent quarters.

(2) Systems required to conduct quarterly monitoring under this subpart must begin to make compliance calculations under paragraph (b) of this

section at the end of the fourth calendar quarter that follows the compliance date in paragraph (a) of this section and at the end of each subsequent quarter. Systems required to conduct monitoring at a frequency that is less than quarterly under this subpart must make compliance calculations under paragraph (b) of this section beginning with the first compliance sample taken after the compliance date in paragraph (a) of this section.

(3) Failure to monitor will be treated as a monitoring violation for each quarter that a monitoring result would be used in a locational running annual average compliance calculation.

(c) *Consecutive systems.* A consecutive system must comply with the TTHM and HAA5 MCLs in § 141.64(b)(2) at each monitoring location in its distribution system identified in its monitoring plan developed under § 141.132(f).

(d) *Reporting.* Systems must submit the compliance calculations and locational running annual averages under this section as part of the reports required under § 141.134.

Subpart O—[Amended]

13. Section 141.151 is amended by revising paragraph (d) to read as follows:

§ 141.151 Purpose and applicability of this subpart.

* * * * *

(d) For the purpose of this subpart, *detected* means: At or above the levels prescribed by § 141.23(a)(4) for inorganic contaminants, at or above the levels prescribed by § 141.24(f)(7) for the contaminants listed in § 141.61(a), at or above the levels prescribed by § 141.24(h)(18) for the contaminants listed in § 141.61(c), at or above the levels prescribed by § 141.131(b)(2)(iii) for the contaminants or contaminant groups listed in § 141.64 and § 141.153(d)(iv), and at or above the levels prescribed by § 141.25(c) for radioactive contaminants.

* * * * *

14. Section 141.153 is amended by revising paragraphs (d)(4)(iv)(B) and (d)(4)(iv)(C) to read as follows:

§ 141.153 Content of the reports.

* * * * *

(d) * * *

(4) * * *

(iv) * * *

(B) When compliance with the MCL is determined by calculating a running annual average of all samples taken at a sampling point: the highest average of any of the sampling points and the range of all sampling points expressed in the same units as the MCL. For the MCLs for TTHM and HAA5 in § 141.64(b)(2) and (3), systems must include the highest locational running annual average for TTHM and HAA5 and the range of individual sample results for all sampling points expressed in the same units as the MCL. If more than one site exceeds the MCL, the system must include the locational running annual averages for all sites that exceed the MCL.

(C) When compliance with the MCL is determined on a system-wide basis by calculating a running annual average of all samples at all sampling points: the average and range of detection expressed in the same units as the MCL. The system is not required to include the range of individual sample results for the IDSE conducted under subpart U of this part.

* * * * *

Subpart Q—[Amended]

15. In Appendix A, the table is amended by revising entries 1.G.1 and 1.G.2, and endnotes 12 and 20, to read as follows:

APPENDIX A TO SUBPART Q OF PART 141.—NPDWR VIOLATIONS AND OTHER SITUATIONS REQUIRING PUBLIC NOTICE [1]

Contaminant	MCL/MRDL/TT violations[2]		Monitoring and testing procedure violations	
	Tier of public notice required	Citation	Tier of public notice required	Citation
I. Violations of National Primary Drinking Water Regulations (NPDWR):[3]				
* * * * * * *				
G. Disinfection Byproducts, * * *				
1. Total trihalomethanes (TTHM)	2	141.12[12], 141.64(b)[20]	3	141.30[12], 141.132(a)–(b)[20], 141.620–.630
2. Haloacetic acids (HAA5)	2	141.64(b)[20]	3	141.132(a)–(b)[20], 141.620–.630

* * * * *

Appendix A—Endnotes

12. §§ 141.12 and 141.30 will no longer apply after December 31, 2003.

* * * * *

20. §§ 141.64(b)(1) and 141.132(a)-(b) apply until §§ 141.64(b)(3) and 141.620–.630 take effect under the schedule in § 141.620(c). § 141.64(b)(2) takes effect on [date three years following final rule publication] and remains in effect until the effective dates for subpart V of this part compliance in the table in § 141.620(c).

* * * * *

16. In Appendix B the table is amended by revising entries H.79, H.80, and endnote 17, and adding endnote 23, to read as follows:

APPENDIX B TO SUBPART Q OF PART 141—STANDARD HEALTH EFFECTS LANGUAGE FOR PUBLIC NOTIFICATION

Contaminant	MCLG[1] mg/L	MCL[2] mg/L	Standard health effects language for public notification
* * * * * * *			
H. Disinfection Byproducts (DBPs), * * *[17]:			
79. Total trihalomethanes (TTHLM)	N/A	0.10/0.120/0.080[18, 19, 23]	* * *
80. Haloacetic acids (HAA5).	N/A	0.060/0.100[20, 23]	* * *

* * * * *

Appendix B—Endnotes

* * * * *

17. Surface water systems and ground water systems under the direct influence of surface water are regulated under subpart H of 40 CFR 141. Subpart H community and non-transient non-community systems serving ≥10,000 must comply with subpart L DBP MCLs and disinfectant maximum residual disinfectant levels (MRDLs) beginning January 1, 2002. All other community and non-transient non-community systems must comply with subpart L DBP MCLs and disinfectant MRDLs beginning January 1, 2004. Subpart H transient non-community systems serving ≥10,000 that use chlorine dioxide as a disinfectant or oxidant must comply with the chlorine dioxide MRDL beginning January 1, 2002. All other transient non-community systems that use chlorine dioxide as a disinfectant or oxidant must comply with the chlorine dioxide MRDL beginning January 1, 2004.

* * * * *

23. Community and non-transient non-community systems must comply with TTHM and HAA5 MCLs of 0.120 mg/L and 0.100 mg/L, respectively (with compliance calculated as a locational running annual average) beginning [date three years following publication of final rule] until they are required to comply with subpart V TTHM and HAA5 MCLs of 0.080 mg/L and 0.060 mg/L, respectively (with compliance calculated as a locational running annual average). Community and non-transient non-community systems serving ≥10,000 must comply with subpart V TTHM and HAA5 MCLs (with compliance calculated as a locational running annual average) beginning [date six years following publication of final rule]. Community and non-transient non-community systems serving <10,000 must comply with subpart V TTHM and HAA5 MCLs (with compliance calculated as a locational running annual average) beginning [date 90 months following publication of final rule].

* * * * *

17. Part 141 is amended by adding new subpart U to read as follows:

Subpart U—Initial Distribution System Evaluations

Sec.

Subpart U—Initial Distribution System Evaluations

§ 141.600 General requirements.

(a) The requirements of subpart U constitute national primary drinking water regulations. The regulations in this subpart establish monitoring and other requirements for identifying compliance monitoring locations to be used for determining compliance with maximum contaminant levels for total trihalomethanes (TTHM) and haloacetic acids (five)(HAA5) in subpart V through the use of an Initial Distribution System Evaluation (IDSE). IDSEs are studies, used in conjunction with subpart L compliance monitoring, to identify and select subpart V compliance monitoring sites that represent high TTHM and HAA5 levels throughout the distribution system. The studies will be based on system-specific monitoring as provided in § 141.602. As an alternative, you may use other system-specific data that provide equivalent or better information on site selection for monitoring under subpart V as provided for in § 141.603(a).

(b) *Applicability.* You are subject to these requirements if your system is a community water system that adds a primary or residual disinfectant other than ultraviolet light or delivers water that has been treated with a primary or residual disinfectant other than ultraviolet light or if your system is a nontransient noncommunity water system that serves at least 10,000 people and adds a primary or residual disinfectant other than ultraviolet light or delivers water that has been treated with a primary or residual disinfectant other than ultraviolet light. You must conduct an Initial Distribution System Evaluation (IDSE), unless you meet the 40/30 certification criteria in § 141.603(b) or the State has granted a very small system waiver for the IDSE or you meet the criteria defined by the State for a very small system waiver under § 141.603(c). If you have a very small system waiver for the IDSE under § 141.603(c), you are not required to submit an IDSE report. All other systems must submit an IDSE report, even if you meet the 40/30 certification criteria in § 141.603(c).

(c) *Schedule.* You must comply with the Initial Distribution System Evaluation (IDSE) on the schedule in the following table, based on your system type.

If you are this type of system	You must submit your IDSE report to the state by[1]
(1) Subpart H serving ≥10,000	[date 24 mos. following publication of final rule]
(2) Subpart H serving <10,000	[date 24 mos. following publication of final rule][2]
(3) Ground water serving ≥10,000	[date 24 mos. following publication of final rule]
(4) Ground water serving <10,000	[date 24 mos. following publication of final rule][2]
(5) Consecutive system	at the same time as the system with the earliest compliance date in the combined distribution system[3]

[1] Systems that meet the 40/30 certification criteria in § 141.603(b) are encouraged to submit their IDSE report as soon as the certification criteria are met.

[2] You must comply by [date 24 mos. following publication of final rule] if you are a wholesale system and any system in the combined distribution system serves at least 10,000 people. You must comply by [date 48 mos. following publication of final rule] if no system in the combined distribution system serves at least 10,000 people.

[3] You must comply by [date 24 mos. following publication of final rule] if any system in the combined distribution system serves at least 10,000 people. You must comply by [date 48 mos. following publication of final rule] if no system in the combined distribution system serves at least 10,000 people.

(d) *Violations.* You must comply with specific monitoring and reporting requirements. You must prepare for, conduct, analyze, and submit your IDSE report no later than the date specified in § 141.600(c). Failure to conduct a required IDSE or to submit a required IDSE report by the date specified in paragraph (c) of this section is a monitoring violation. If you do not submit your IDSE report to your State, or if you submit the report after the specified date, you must comply with any additional State-specified requirements, which may include conducting another IDSE.

§ 141.601 Initial Distribution System Evaluation (IDSE) requirements.

(a) You must conduct an IDSE that meets the requirements in § 141.602 or § 141.603(a) or meet the 40/30 certification criteria in § 141.603(b) or have received a very small system waiver for the IDSE from the State under § 141.603(c). If you do not take the full complement of TTHM and HAA5 compliance samples required of a system with your population and source water under subpart L, but are required to conduct an IDSE under this subpart, you are not eligible for either the 40/30 certification in § 141.603(b) or the very small system waiver in § 141.603(c) and must conduct an IDSE that meets the requirements in § 141.602 or § 141.603(a).

(b) You may use any alternative listed in the table below for which you qualify.

IDSE ALTERNATIVES

Alternatives	Eligibility	Regulatory reference
(1) Monitoring	All systems required to conduct an IDSE	§ 141.602
(2) System-specific study	All systems required to conduct an IDSE	§ 141.603(a)
(3) 40/30 certification	Any system with all TTHM compliance samples ≤0.040 mg/L and all HAA5 compliance samples ≤0.030 mg/L during the period specified in § 141.603(b).	§ 141.603(b)
(4) Very small system waiver.	Any system serving <500 for which the State has granted a waiver	§ 141.603(c)

(c) IDSE results will not be used for the purpose of determining compliance with MCLs in § 141.64.

(d) *Additional provisions:*

(1) You may consider multiple wells drawing water from a single aquifer as one treatment plant for determining the minimum number of TTHM and HAA5 samples required, with State approval in accordance with criteria developed under § 142.16(h)(5) of this chapter. State approvals made under § 141.132(a)(2) to treat multiple wells drawing water from a single aquifer as one treatment plant remain in effect unless withdrawn by the State.

(2) If you are a consecutive system, you must comply with the IDSE requirements in this subpart based on whether you buy some or all of your water from another PWS during 2004 for systems with an IDSE report due [date 24 months after publication of final rule] or during 2006 for systems with an IDSE report due [date 48 months after publication of final rule]. A consecutive system that buys some, but not all, of its finished water during the period identified in this paragraph must treat each consecutive system entry point from a wholesale system as a treatment plant for the consecutive system for the purpose of determining monitoring requirements of this subpart if water is delivered from the wholesale system to the consecutive system for at least 60 consecutive days through any of the consecutive system entry points. A consecutive system that buys all its finished water during the period identified in this paragraph must monitor based on population and source water for the purpose of determining monitoring requirements of this subpart.

(i) You may request that the State allow multiple consecutive system entry points from a single wholesale system to a single consecutive system to be considered one treatment plant.

(ii) In the request to the State for approval of multiple consecutive system entry points to be considered one treatment plant, you must demonstrate that factors such as relative locations of entry points, detention times, sources, and the presence of treatment (such as corrosion control or booster disinfection) will have a minimal differential effect on TTHM and HAA5 formation associated with individual entry points.

§ 141.602 IDSE monitoring.

(a) You must conduct IDSE monitoring for each treatment plant as indicated in the table in this paragraph. You must collect dual sample sets at each monitoring location. One sample in the set must be analyzed for TTHM. The other sample in the set must be analyzed for HAA5. If approved by the State under the provisions of § 141.601(d)(1), you may consider multiple wells drawing water from the same aquifer to be one treatment plant for the purpose of determining monitoring requirements. You must conduct one monitoring period during the peak historical month for TTHM levels or HAA5 levels or the month of warmest water temperature. You must review available compliance, study, or operational data to determine the peak historical month for TTHM or HAA5 levels or warmest water temperature.

If you are this type of system	Then you must monitor	At these locations for each treatment plant [1,2]
(1) Subpart H serving ≥10,000	Approximately every 60 days for one year (six monitoring periods).	Eight dual sample sets per monitoring period at locations other than subpart L TTHM/HAA5 monitoring locations based on conditions: If CHLORINE is used as residual disinfectant: one near distribution system entry point, two at average residence time, five at points representative of highest expected TTHM (three sites) and HAA5 concentration (two sites). If CHLORAMINE is used as residual disinfectant for any part of the year: two near distribution system entry point, two at average residence time, four at points representative of highest expected TTHM (two sites) and HAA5 concentration (two sites).
(2) Subpart H serving 500-9,999.	Approximately every 90 days for one year (four monitoring periods).	Two dual sample sets per monitoring period at locations other than the for one year subpart L TTHM/HAA5 monitoring location; one each representative of expected high periods) TTHM level and HAA5 level.
(3) Subpart H serving <500	Approximately every 180 days for one year (two monitoring periods).	Two dual sample sets per monitoring period at locations other than the subpart L TTHM/HAA5 monitoring location; one each representative of expected high periods) TTHM level and HAA5 level.
(4) Ground water serving ≥10,000.	Approximately every 90 days for one year (four monitoring periods).	Two dual sample sets per monitoring period at locations other than the subpart L TTHM/HAA5 monitoring location; one each representative of expected high periods) TTHM level and HAA5 level.
(5) Ground water serving < 10,000.	Approximately every 180 days for one year (two monitoring periods).	Two dual sample sets per monitoring period at locations other than the subpart L TTHM/HAA5 monitoring location; one each representative of expected high periods) TTHM level and HAA5 level.
(6) Consecutive system	At a frequency based on source water and your population [3].	—For a consecutive system that buys all its finished water, number of samples and locations as specified in paragraph (b) of this section. —For a consecutive system that buys some, but not all, of its finished water, serves ≥10,000, and receives water from a subpart H system: at IDSE locations required of a subpart H system serving ≥10,000. —For a consecutive system that does not meet any other criteria in this paragraph: two dual sample sets per monitoring period at locations other than the subpart L TTHM/HAA5 compliance monitoring location; one each representative of expected high TTHM levels and HAA5 levels.

[1] Including treatment plants for consecutive system entry points that operate for at least 60 consecutive days.
[2] The State may require additional monitoring.
[3] You must monitor at the frequency required of a subpart H system with your population if you deliver any water required to be treated under subpart H. You must monitor at the frequency required of a ground water system with your population if you deliver no water required to be treated under subpart H.

(b) *IDSE monitoring for consecutive systems that buy all their water.*

IDSE MONITORING LOCATIONS FOR CONSECUTIVE SYSTEMS THAT BUY ALL THEIR WATER

Population category	Number of dual sample set locations per monitoring period	Distribution system dual sample set locations [1]			
		Near entry points [2]	Average residence time	Highest TTHM locations	Highest HAA5 locations
Subpart H Consecutive Systems that buy all their water					
<500 [3]	2			1	1
500 to 4,999 [4]	2			1	1
5,000 to 9,999 [4]	4		1	2	1
10,000 to 24,999 [5]	8	1	2	3	2
25,000 to 49,999 [5]	12	2	3	4	3
50,000 to 99,999 [5]	16	3	4	5	4
100,000 to 499,999 [5]	24	4	6	8	6
500,000 to 1,499,999 [5]	32	6	8	10	8
1,500,000 to 4,999,999 [5]	40	8	10	12	10
>=5,000,000 [5]	48	10	12	14	12

IDSE MONITORING LOCATIONS FOR CONSECUTIVE SYSTEMS THAT BUY ALL THEIR WATER—Continued

Population category	Number of dual sample set locations per monitoring period	Distribution system dual sample set locations [1]			
		Near entry points [2]	Average residence time	Highest TTHM locations	Highest HAA5 locations
Ground Water Consecutive Systems that buy all their water					
<500 [3]	2			1	1
500 to 9,999 [4]	2			1	1
10,000 to 99,999 [4]	6	1	1	2	2
100,000 to 499,999 [4]	8	1	1	3	3
≥500,000 [4]	12	2	2	4	4

[1] Sampling locations to be distributed through distribution system. You may not use subpart L compliance monitoring locations as IDSE sample sites. You must collect a dual sample set at each sample location.

[2] If the actual number of entry points to the distribution system is fewer than the specified number of ''near entry point'' sampling sites, take additional samples equally at highest TTHM and HAA5 locations. If there is an odd extra location number, take the odd sample at highest TTHM location. If the actual number of entry points to the distribution system is more than the specified number of sampling locations, take samples first at subpart H entry points to the distribution system having the highest water flows and then at ground water entry points to the distribution system having the highest water flows.

[3] You must conduct monitoring during two monitoring periods approximately 180 days apart.

[4] You must conduct monitoring during four monitoring periods approximately 90 days apart.

[5] You must conduct monitoring during six monitoring periods approximately 60 days apart.

(c) You must prepare an IDSE monitoring plan prior to starting IDSE monitoring and implement that plan. In the plan, you must identify specific monitoring locations and dates that meet the criteria in paragraphs (a) and (b) of this section, as applicable.

§ 141.603 Alternatives other than IDSE monitoring.

In lieu of IDSE monitoring under § 141.602, you may use one of the alternatives identified in paragraphs (a) through (c) of this section for which you qualify to comply with this subpart.

(a) *System-specific study.* You may perform an IDSE study based on system-specific monitoring or system-specific data if such a study identifies equivalent or superior monitoring sites representing high TTHM and HAA5 levels as would be identified by IDSE monitoring under § 141.602. You must submit an IDSE report that complies with § 141.604.

(b) *40/30 certification.* In order to qualify for the 40/30 certification, you must not have had any TTHM or HAA5 monitoring violations during the periods specified in paragraphs (b)(1) through (b)(3) of this section.

(1) You are not required to comply with § 141.602 or paragraph (a) of this section if you certify to your State that all compliance samples under subpart L in 2002 and 2003 (for subpart H systems serving ≥10,000 people) or in 2004 and 2005 (for systems serving <10,000 people that are not required to submit an IDSE report by [date 24 months following publication of final rule]) were ≤0.040 mg/L for TTHM and ≤0.030 mg/L for HAA5.

(2) If you are a ground water system serving ≥10,000 people, you are not required to comply with § 141.602 or paragraph (a) of this section if you certify to your State that all TTHM samples taken under § 141.30 in 2003 are ≤0.040 mg/L and that all TTHM and HAA5 compliance samples taken under subpart L during 2004 are ≤0.040 mg/L and ≤0.030 mg/L, respectively.

(3) If you are a consecutive system serving <10,000 required to submit an IDSE report by [date 24 months following publication of final rule], you are not required to comply with § 141.602 or paragraph (a) of this section if you certify to your State that all TTHM and HAA5 compliance samples taken under subpart L during 2004 are ≤0.040 mg/L and ≤0.030 mg/L, respectively.

(4) You must submit an IDSE report that complies with § 141.604 and contains the required certification.

(c) *Very small system waiver.* If you serve fewer than 500 people, the State may waive IDSE monitoring if the State determines that the TTHM and HAA5 monitoring site for each plant under § 141.132 is sufficient to represent both the highest TTHM and the highest HAA5 concentration in your distribution system. If your IDSE monitoring is waived, you are not required to submit an IDSE report. You must monitor under subpart V during the same month and at the same location as used for compliance sampling in subpart L.

§ 141.604 IDSE reports.

You must submit your IDSE report to the State according to the schedule in § 141.600(c).

(a) If you complied by meeting the provisions of §§ 141.602 or 141.603(a), your IDSE report must include the elements required in paragraphs (a)(1) through (a)(3) of this section.

(1) Your report must include all TTHM and HAA5 analytical results from subpart L compliance monitoring conducted during the period of the IDSE presented in a tabular or spreadsheet format acceptable to the State. Your report must also include a schematic of your distribution system, with results, location, and date of all IDSE monitoring, system-specific study monitoring, and subpart L compliance samples noted.

(2) If you conducted IDSE monitoring under § 141.602, your report must include all IDSE TTHM and HAA5 analytical results presented in a tabular or spreadsheet format acceptable to the State. Your report must also include all additional data you relied on to justify IDSE monitoring site selection, plus your original monitoring plan developed under § 141.602(c) and an explanation of any deviations from that plan.

(3) If you used the system-specific study alternative in § 141.603(a), your report must include the basis (studies, reports, data, analytical results, modeling) by which you determined that the recommended subpart V monitoring sites representing high TTHM and HAA5 levels are comparable or superior to those that would otherwise have been identified by IDSE

monitoring under § 141.602. Your report must also include an analysis that demonstrates that your system-specific study characterized expected TTHM and HAA5 levels throughout your entire distribution system.

(b) If you meet the 40/30 certification criteria in § 141.603(b), your IDSE report must include all TTHM and HAA5 analytical results from compliance monitoring used to qualify for the 40/30 certification and a schematic of your distribution system (with results, location, and date of all compliance samples noted). You must also include results of those compliance samples taken after the period used to qualify for the 40/30 certification for State review.

(c) Your IDSE report must include your recommendations and justification for where and during what month(s) TTHM and HAA5 monitoring for Subpart V should be conducted. You must base your recommendations on the criteria in § 141.605. Your IDSE report must also include the population served; system type (subpart H or ground water); whether your system is a consecutive system; and, if you conducted plant-based monitoring, the number of treatment plants and consecutive system entry points.

(d) *Recordkeeping.* You must retain a complete copy of your IDSE report submitted under § 141.604 for 10 years after the date that you submitted your IDSE report. If the State modifies the monitoring requirements that you recommended in your IDSE report or if the State approves alternative monitoring sites, you must keep a copy of the State's notification on file for 10 years after the date of the State's notification. You must make the IDSE report and any State notification available for review by the State or the public.

§ 141.605 Subpart V monitoring location recommendations to the State.

(a) Subpart H systems serving at least 10,000 people. If you are a system required to take four dual sample sets per treatment plant per quarter under routine monitoring under § 141.621, you must base your recommendations on the locations in the distribution system where you expect to find the highest TTHM and HAA5 LRAAs. In determining the highest LRAA, you must evaluate both subpart L compliance data and IDSE data. For each plant, you must recommend locations with:

(1) The two highest TTHM locational running annual averages;

(2) The highest HAA5 locational running annual average; and

(3) An existing subpart L compliance monitoring location identified in the § 141.132(f) monitoring plan that is the location of either the highest TTHM or HAA5 LRAA among the three compliance monitoring locations representative of average residence time (by calculating an LRAA for each compliance monitoring location using the compliance monitoring results collected during the period of the IDSE).

(4) You may recommend locations other than those in paragraphs (a)(1) through (3) of this section if you include a rationale for selecting other locations. If the State approves, you must monitor at these locations to determine compliance under subpart V.

(5) If any of the criteria in this paragraph (a) of this section would cause fewer than four locations per treatment plant to be recommended, you must identify an additional location(s) with the next highest HAA5 LRAA.

(b) *All groundwater systems and subpart H systems serving fewer than 10,000 people.* If you are a system required to take two dual sample sets per treatment plant per quarter or per year or one TTHM and one HAA5 sample per plant per year for routine monitoring under § 141.621, you must select the locations with the highest TTHM locational running annual average and highest HAA5 locational running annual average, unless you include a rationale for selecting other locations. If the State approves, you must monitor at these other locations to determine compliance under subpart V. If any of the criteria in this paragraph would cause only one location per treatment plant to be recommended, you must identify an additional location with the next highest HAA5 LRAA or request that you be allowed to monitor only at that location.

(c) *Systems that qualify for the 40/30 certification.* If you use the 40/30 certification in § 141.603(b), you may use either subpart L compliance monitoring locations or you may identify monitoring locations for Subpart V that are different from those for subpart L. You must include a rationale for changing existing subpart L locations, choosing locations with a long residence time and a detectable residual. If you choose monitoring locations other than those in subpart L as subpart V compliance monitoring locations, you must retain the subpart L locations with the highest TTHM and HAA5 LRAAs. If any of the criteria in this paragraph would cause only one location per treatment plant to be recommended, you must identify an additional location with the next highest HAA5 LRAA or request that you be allowed to monitor only at that location. If you are required to monitor at more locations under subpart V of this part than under subpart L of this part, you must identify additional locations with a long residence time and a detectable residual.

(d) *Consecutive systems that buy some, but not all, of their finished water.* Your recommendations must comply with §§ 141.601(d) and 141.605 (a) through (c).

(e) *Consecutive systems that buy all their finished water.*

(1) You must select the number of monitoring locations specified in the following tables.

SUBPART V.—SAMPLE FREQUENCY FOR TTHM/HAA5 (AS DUAL SAMPLE SETS) FOR CONSECUTIVE SYSTEMS THAT BUY ALL THEIR WATER

Population	Number of samples
Subpart H Consecutive Systems That Buy All Their Water	
<500	1 TTHM and 1 HAA5 sample per year at different locations and time if the highest TTHM and HAA5 occurred at different locations and/or time or 1 dual sample set per year if the highest TTHM and HAA5 occurred at the same location and time of year, taken during the peak historical month for DBP concentrations or (if unknown) month of warmest water temperature.
500 to 4,999	1 TTHM and 1 HAA5 sample per quarter at different locations if the highest TTHM and HAA5 occurred at different locations or 1 dual sample set per quarter if the highest TTHM and HAA5 occurred at the same location.
5,000 to 9,999	2 dual sample sets per quarter.
10,000 to 24,999	4 dual sample sets per quarter.
25,000 to 49,999	6 dual sample sets per quarter.
50,000 to 99,999	8 dual sample sets per quarter.

SUBPART V.—SAMPLE FREQUENCY FOR TTHM/HAA5 (AS DUAL SAMPLE SETS) FOR CONSECUTIVE SYSTEMS THAT BUY ALL THEIR WATER—Continued

Population	Number of samples
100,000 to 499,999	12 dual sample sets per quarter.
500,000 to 1,499,999	16 dual sample sets per quarter.
1,500,000 to 4,999,999	20 dual sample sets per quarter.
>=5,000,000	24 dual sample sets per quarter.
Ground Water Consecutive Systems That Buy All Their Water	
<500	1 TTHM and 1 HAA5 sample per year at different locations and time if the highest TTHM and HAA5 occurred at different locations and/or time or 1 dual sample set per year if the highest TTHM and HAA5 occurred at the same location and time of year, taken during the peak historical month for DBP concentrations, or, if unknown, during month of warmest water temperature.
500 to 9,999	2 dual sample sets per year. Must be taken during the peak historical month for DBP concentrations.
10,000 to 99,999	4 dual sample sets per quarter.
100,000 to 499,999	6 dual sample sets per quarter.
≥500,000	8 dual sample sets per quarter.

(2) You must select Subpart V monitoring locations based on subpart L compliance monitoring results collected during the period of the IDSE and IDSE monitoring results. You must follow the protocol in paragraphs (e)(2)(i) through (iv) of this section, unless you provide a rationale for recommending different locations. If required to monitor at more than four locations, you must repeat the protocol as necessary, alternating between sites with the highest HAA5 LRAA and the highest TTHM LRAA not previously selected as a subpart V monitoring location for choosing locations under paragraph (e)(2)(iii) of this section.

(i) Location with the highest TTHM LRAA not previously selected as a subpart V monitoring location.

(ii) Location with the highest HAA5 LRAA not previously selected as a subpart V monitoring location.

(iii) Existing subpart L average residence time compliance monitoring location.

(iv) Location with the highest TTHM LRAA not previously selected as a subpart V monitoring location.

(3) You may recommend locations other than those in paragraph (e)(2) of this section if you include a rationale for selecting other locations. If the State approves, you must monitor at these locations to determine compliance under subpart V.

(4) If you used the 40/30 certification in § 141.603(b) and do not have sufficient subpart L monitoring locations to identify the required number of Subpart V compliance monitoring locations, you must identify additional locations by selecting a site representative of maximum residence time and then a site representative of average residence time and repeating until the required number of compliance monitoring locations have been identified.

(f) You must schedule samples during the peak historical month for TTHM and HAA5 concentration, unless the State approves another month. Once you have identified the peak historical month, and if you are required to conduct routine monitoring at least quarterly, you must schedule subpart V compliance monitoring at a regular frequency of approximately every 90 days or fewer.

18. Part 141 is amended by adding new subpart V to read as follows:

Subpart V—Stage 2B Disinfection Byproducts Requirements

Sec.

Subpart V—Stage 2B Disinfection Byproducts Requirements

§ 141.620 General requirements.

(a) The requirements of subpart V constitute national primary drinking water regulations. These regulations establish requirements for control of certain disinfection byproducts that supercede some requirements in subpart L and that are *in addition* to other requirements that are currently required under subpart L of this part. The regulations in this subpart establish monitoring and other requirements for achieving compliance with maximum contaminant levels for total trihalomethanes (TTHM) and haloacetic acids (five)(HAA5).

(b) *Applicability.* You are subject to these requirements if your system is a community water system or nontransient noncommunity water system that adds a primary or residual disinfectant other than ultraviolet light or delivers water that has been treated with a primary or residual disinfectant other than ultraviolet light.

(c) *Schedule.* You must comply with the requirements in this subpart on the schedule in the following table, based on your system type.

If you are this type of system	You must comply with subpart V by:[1 2 3]
(1) Subpart H serving ≥10,000	[date 72 mos following publication of final rule].
(2) Subpart H serving <10,000	[date 90 mos following publication of final rule] if no *Cryptosporidium* monitoring is required under § 141.706(c) OR [date 102 mos following publication of final rule] if *Cryptosporidium* monitoring is required under § 141.706(c).
(3) Ground water serving ≥10,000	[date 72 mos following publication of final rule].
(4) Ground water serving <10,000	[date 90 mos following publication of final rule].

If you are this type of system	You must comply with subpart V by: [1] [2] [3]
(5) Consecutive system	—at the same time as the system with the earliest compliance date in the combined distribution system.

[1] The State may grant up to an additional 24 months for compliance if you require capital improvements.

[2] If you are required to conduct quarterly monitoring, you must begin monitoring in the first full calendar quarter that follows the compliance date in this table. If you are required to conduct monitoring at a frequency that is less than quarterly, you must begin monitoring in the calendar month recommended in the IDSE report prepared under § 141.604 no later than 12 months after the compliance date in this table. If you are not required to submit an IDSE report, you must begin monitoring during the calendar month identified in the monitoring plan developed under § 141.622 no later than 12 months after the compliance date.

[3] If you are required to conduct quarterly monitoring, you must make compliance calculations at the end of the fourth calendar quarter that follows the compliance date and at the end of each subsequent quarter (or earlier if the LRAA calculated based on fewer than four quarters of data would cause the MCL to be exceeded regardless of the monitoring results of subsequent quarters). If you are required to conduct monitoring at a frequency that is less than quarterly, you must make compliance calculations beginning with the first compliance sample taken after the compliance date.

(d) *Monitoring and compliance.* You must monitor at sampling locations identified in your monitoring plan developed under § 141.622. To determine compliance with subpart V MCLs, you must calculate locational running annual averages for TTHM and HAA5 using monitoring results collected under this subpart. If you fail to complete four consecutive quarters of monitoring, you must calculate compliance with the MCL based on an average of the available data from the most recent four quarters.

(e) *Violations.* You must comply with specific monitoring and reporting requirements. Failure to monitor in accordance with the monitoring plan required under § 141.622 is a monitoring violation. Failure to monitor will also be treated as a monitoring violation for the entire period covered by a locational running annual average compliance calculation for the subpart V MCLs in § 141.64(b)(3).

(f) *Additional provisions.*

(1) You may consider multiple wells drawing water from a single aquifer as one treatment plant for determining the minimum number of TTHM and HAA5 samples required, with State approval in accordance with criteria developed under § 142.16(h)(5) of this chapter. Approvals made under §§ 141.132(a)(2) and 141.601(d) remain in effect unless withdrawn by the State.

(2) *Consecutive systems.* For the purposes of this subpart, you must determine whether you buy all or some of your water based on your categorization for the IDSE under subpart U, unless otherwise directed by the State. If you were not categorized under subpart U, you must determine whether you buy all or some of your water based on your categorization during 2005, unless otherwise directed by the State.

(3) For the purposes of determining monitoring requirements of this subpart, each consecutive system entry point from a wholesale system to a consecutive system that buys some, but not all, of its finished water is considered a treatment plant for that consecutive system.

(i) You may request that the State allow multiple consecutive system entry points from a single wholesale system to a single consecutive system to be considered one treatment plant.

(ii) In the request to the State for approval of multiple consecutive system entry points to be considered one treatment plant, you must demonstrate that factors such as relative locations of entry points, detention times, sources, and the presence of treatment (such as corrosion control or booster disinfection) will have a minimal differential effect on TTHM and HAA5 formation associated with individual entry points.

§ 141.621 Routine monitoring.

(a) You must monitor at the locations and frequencies listed in the following table.

If you are this type of system	Then you must monitor	At these locations for each treatment plant [1]
(1) Subpart H serving ≥10,000.	four dual sample sets per quarter per treatment plant, taken approximately every 90 days. One quarterly set must be taken during the peak historical month for DBP concentrations [2].	—locations recommended to the State in the IDSE report submitted under subpart U.
(2) Subpart H serving 500–9,999.	two dual sample sets per quarter per treatment plant, taken approximately every 90 days. One quarterly set must be taken during the peak historical month for DBP concentrations [2].	—locations recommended to the State in the IDSE report submitted under subpart U.[3]
(3) Subpart H serving <500	one TTHM and one HAA5 sample per year per treatment plant, taken during the peak historical month for DBP concentrations.	—locations recommended to the State in the IDSE report submitted under subpart U.[4]
(4) Ground water serving ≥10,000.	two dual sample sets per quarter per treatment plant, taken approximately every 90 days. One quarterly set must be taken during the peak historical month for DBP concentrations [2].	—locations recommended to the State in the IDSE report submitted under subpart U.[3]
(5) Ground water serving 500–9,999.	two dual sample sets per year per treatment plant, taken during the peak historical month for DBP concentrations [2].	—locations recommended to the State in the IDSE report submitted under subpart U.[3]
(6) Ground water serving <500.	one TTHM and one HAA5 sample per year per treatment plant, taken during the peak historical month for DBP concentrations.	—locations recommended to the State in the IDSE report submitted under subpart U.[4]
(7) Consecutive system that buys some, but not all, of its finished water.	based on your own population and source water, except that consecutive systems that receive water from a subpart H system must monitor as a subpart H system.	—locations recommended to the State in the IDSE report submitted under subpart U.

If you are this type of system	Then you must monitor	At these locations for each treatment plant [1]
(8) Consecutive system that buys all its finished water.	as specified in § 141.605(e)	—locations recommended to the State in the IDSE report submitted under subpart U.

[1] Unless the State has approved or required other locations or additional locations based on the IDSE report or other information, or you have updated the monitoring plan under § 141.622.
[2] A dual sample set is a set of two samples collected at the same time and same location, with one sample analyzed for TTHM and the other sample analyzed for HAA5.
[3] If you have a single location that has both the highest TTHM LRAA and highest HAA5 LRAA, you may take a dual sample set only at that location after approval by the State.
[4] You are required to sample for both TTHM and HAA5 at one location if that location is the highest for both TTHM and HAA5. If different locations have high TTHM and HAA5 LRAAs, you may sample for TTHM only at the high TTHM location and for HAA5 only at the high HAA5 location. If you have received a very small system waiver for IDSE monitoring from the State under § 141.603(c), you must monitor for TTHM and HAA5 as a dual sample set at the subpart L monitoring location (a point representative of maximum residence time) during the month of warmest water temperature.

(b) You must begin monitoring at the locations you have recommended in your IDSE report submitted under § 141.604 following the schedule in § 141.620(c), unless the State requires other locations or additional locations after its review. If you have received a very small system waiver under § 141.603(c), you must monitor at the location(s) identified in your monitoring plan in § 141.132(f), updated as required by § 141.622.

(c) You must use an approved method listed in § 141.131 for TTHM and HAA5 analyses in this subpart. Analyses must be conducted by laboratories that have received certification by EPA or the State as specified in § 141.131.

§ 141.622 Subpart V monitoring plan.

(a) You must develop and implement a monitoring plan to be kept on file for State and public review. You may comply by updating the monitoring plan developed under § 141.132(f) no later than the date identified in § 141.620(c) for subpart V compliance. If you have received a very small system waiver under § 141.603(c), you must comply by updating the monitoring plan developed under § 141.132(f) no later than the date identified in § 141.620(c) for subpart V compliance. The monitoring plan must contain the elements in paragraphs (a)(1) through (a)(5) of this section:

(1) Monitoring locations;

(2) Monitoring dates;

(3) Compliance calculation procedures;

(4) Monitoring plans for any other systems in the combined distribution system if monitoring requirements have been modified based on data from other systems; and

(5) Any permits, contracts, or agreements with third parties (including other PWSs, laboratories, and State agencies) to sample, analyze, report, or perform any other system requirement in this subpart.

(b) The monitoring plan will reflect the recommendations of the IDSE report required under subpart U, along with any State-mandated modifications. The State must approve any monitoring sites for which you are required to provide a rationale in your IDSE report by § 141.605(a)(4).

(c) If you are a subpart H system serving more than 3,300 people, you must submit a copy of your monitoring plan to the State prior to the date you are required to comply with the monitoring plan.

(d) You may modify your monitoring plan to reflect changes in treatment, distribution system operations and layout (including new service areas), or other factors that may affect TTHM or HAA5 formation. If you change monitoring locations, you must replace locations with the lowest LRAA and notify the State how new sites were selected as part of the next report due under § 141.630. The State may also require modifications in your monitoring plan.

§ 141.623 Reduced monitoring.

(a) *Systems other than consecutive systems that buy all their water.* You may reduce monitoring by meeting the criteria in the table in this paragraph at all treatment plants in the system. You may only use data collected under the provisions of this subpart or subpart L of this part to qualify for reduced monitoring.

If you are this type of system	Then you may reduce monitoring if you have monitoring results under § 141.621 and	To reduce monitoring per plant at these locations/frequency	
		TTHM	HAA5
(1) Subpart H serving ≥10,000.	—the LRAA is ≤0.040 mg/L for TTHM and ≤0.030 for HAA5 at ALL monitoring locations, AND —the source water annual average TOC level, before any treatment, is ≤4.0 mg/L at each subpart H treatment plant [1].	—monitor once per quarter by taking a dual sample set at the location with the highest TTHM LRAA or single measurement.	—monitor once per quarter by taking a dual sample set at the location with the highest HAA5 LRAA or single measurement.
(2) Subpart H serving 500–9,999.	—the LRAA is ≤0.040 mg/L for TTHM and ≤0.030 for HAA5 at ALL monitoring locations, AND —the source water annual average TOC level, before any treatment, is ≤4.0 mg/L at each subpart H treatment plant [1].	—monitor once per year by taking a dual sample set at the location with the highest TTHM single measurement during the quarter that the highest single TTHM measurement occurred [2].	—monitor once per year by taking a dual sample set at the location with the highest HHA5 single measurement during the quarter that the highest single HHA5 measurement occurred.[2]
(3) Subpart H serving <500.	—monitoring may not be reduced to fewer than one TTHM sample and one HAA5 sample per year.	not applicable	not applicable.
(4) Ground water serving ≥10,000.	—the LRAA is ≤0.040 mg/L for TTHM and ≤0.030 for HAA5 at ALL monitoring locations.	—monitor once per year by taking a dual sample set at the location with the highest TTHM single measurement during the quarter that the highest single TTHM measurement occurred [2].	—monitor once per year by taking a dual sample set at the location with the highest HHA5 single measurement during the quarter that the highest single HHA5 measurement occurred.[2]

If you are this type of system	Then you may reduce monitoring if you have monitoring results under §141.621 and	To reduce monitoring per plant at these locations/frequency	
		TTHM	HAA5
(5) Ground water serving 500–9,999.	—the LRAA is ≤0.040 mg/L for TTHM and ≤0.030 for HAA5 at ALL monitoring locations.	—monitor once every third year by taking a dual sample set at the location with the highest TTHM single measurement during the quarter that the highest single TTHM measurement occurred[2].	—monitor once every third year by taking a dual sample set at the location with the highest HHA5 single measurement during the quarter that the highest single HHA5 measurement occurred.[2]
(6) Ground water serving <500.	—the LRAA is ≤0.040 mg/L for TTHM and ≤0.030 for HAA5 at ALL monitoring locations.	—monitor once every third year for TTHM at the location with the highest TTHM single measurement during the quarter that the highest single TTHM measurement occurred[2].	—monitor once every third year for HAA5 at the location with the highest HAA5 single measurement during the quarter that the highest single HAA5 measurement occurred.[2]
(7) Consecutive system that buys some, but not all, of its finished water[3].	—the LRAA is ≤0.040 mg/L for TTHM and ≤0.030 for HAA5 at ALL monitoring locations.	—monitor at the location(s) and frequency associated with a non-consecutive system with the same population and source water type.	—monitor at the location(s) and frequency associated with a non-consecutive system with the same population and source water type.[2]

[1] TOC monitoring must comply with the provisions of either §141.132(d) or §141.132(e).
[2] If your location for reduced monitoring for TTHM and HAA5 is the same location and if your quarter for the highest TTHM and HAA5 single measurement is the same, you may take one dual sample set at that location during that quarter.
[3] Consecutive systems that buy some, but not all, of their finished water may reduce monitoring based on their own population and their wholesale system(s)'s source water type to the frequency and location(s) required in this section, unless the consecutive system treats surface water or ground water under the direct influence of surface water. If the consecutive system treats surface water or ground water under the direct influence of surface water, it must base reduced monitoring on its population and classification as a subpart H system.

(b) *Consecutive systems that buy all their water.* You may reduce monitoring to the level specified in the table in this paragraph if the LRAA is ≤0.040 mg/L for TTHM and ≤0.030 mg/L for HAA5 at all monitoring locations. You may only use data collected under the provisions of this subpart or subpart L of this part to qualify for reduced monitoring.

REDUCED MONITORING FREQUENCY FOR CONSECUTIVE SYSTEMS THAT BUY ALL THEIR WATER.

Population	Reduced monitoring frequency and location
Subpart H systems	
<500	Monitoring may not be reduced.
500 to 4,999	1 TTHM and 1 HAA5 sample per year at different locations or during different quarters if the highest TTHM and HAA5 measurements occurred at different locations or different quarters or 1 dual sample set per year if the highest TTHM and HAA5 measurements occurred at the same location and quarter.
5,000 to 9,999	2 dual sample sets per year; one at the location with the highest TTHM single measurement during the quarter that the highest single TTHM measurement occurred, one at the location with the highest HAA5 single measurement during the quarter that the highest single HAA5 measurement occurred.
10,000 to 24,999	2 dual sample sets per quarter at the locations with the highest TTHM and highest HAA5 LRAAs.
25,000 to 49,999	2 dual sample sets per quarter at the locations with the highest TTHM and highest HAA5 LRAAs.
50,000 to 99,000	4 dual sample sets per quarter—at the locations with the two highest TTHM and two highest HAA5 LRAAs.
100,000 to 499,999	4 dual sample sets per quarter—at the locations with the two highest TTHM and two highest HAA5 LRAAs.
500,000 to 1,499,999	6 dual sample sets per quarter—at the locations with the three highest TTHM and three highest HAA5 LRAAs.
1,500,000 to 4,999,999	6 dual sample sets per quarter—at the locations with the three highest TTHM and three highest HAA5 LRAAs.
>=5,000,000	8 dual sample sets per quarter at the locations with the four highest TTHM and four highest HAA5 LRAAs.
Ground water systems	
<500	1 TTHM and 1 HAA5 sample every third year at different locations and time if the highest TTHM and HAA5 measurements occurred at different locations and/or time or 1 dual sample set every third year if the highest TTHM and HAA5 measurements occurred at the same location and time of year.
500 to 9,999	1 TTHM and 1 HAA5 sample every year at different locations and time if the highest TTHM and HAA5 measurements occurred at different locations and/or time or 1 dual sample set every year if the highest TTHM and HAA5 measurements occurred at the same location and time of year.
10,000 to 99,000	2 dual sample sets per year; one at the location with the highest TTHM single measurement during the quarter that the highest single TTHM measurement occurred and one at the location with the highest HAA5 single measurement during the quarter that the highest single HAA5 measurement occurred.
100,000 to 499,999	2 dual sample sets per quarter; at the locations with the highest TTHM and highest HAA5 LRAAs.
≥500,000	4 dual sample sets per quarter; at the locations with the two highest TTHM and two highest HAA5 LRAAs.

(c) You may remain on reduced monitoring as long as the TTHM LRAA ≤0.040 mg/L and the HAA5 LRAA ≤0.030 mg/L at each monitoring location (for systems with quarterly monitoring) or each TTHM sample ≤0.060 mg/L and each HAA5 sample ≤0.045 mg/L (for systems with annual or less frequent monitoring). In addition, the source water annual average TOC level, before any treatment, must be ≤4.0 mg/L at each treatment plant treating surface water or ground water under the direct influence of surface water, based on monitoring conducted under either §§ 141.132(d) or 141.132(e). If the LRAA at any location exceeds either 0.040 mg/L for TTHM or 0.030 mg/L for HAA5 or if the annual (or less frequent) sample at any location exceeds either 0.060 mg/L for TTHM or 0.045 mg/L for HAA5, or if the source water annual average TOC level, before any treatment, >4.0 mg/L at any treatment plant treating surface water or ground water under the direct influence of surface water, the system must resume routine monitoring

under § 141.621 for all treatment plants or begin increased monitoring for all treatment plants if § 141.625 applies.

(d) The State may return your system to routine monitoring at the State's discretion.

§ 141.624 Additional requirements for consecutive systems.

If you are a consecutive system that does not add a disinfectant but delivers water that has been disinfected with other than ultraviolet light, you must comply with monitoring requirements for chlorine and chloramines in § 141.132(c)(1) and the compliance requirements in § 141.133(c)(1) beginning [date three years after publication of final rule] and report monitoring results under § 141.134(c), unless required earlier by the State.

§ 141.625 Conditions requiring increased monitoring.

(a) If you are required to monitor at a particular location yearly or less frequently than yearly under §§ 141.621 or 141.623, you must increase monitoring to dual sample sets once per quarter (taken approximately every 90 days) at all locations if either the annual (or less frequent) TTHM sample >0.080 mg/L or the annual (or less frequent) HAA5 sample >0.060 mg/L at any location.

(b) You are not in violation of the MCL until the LRAA calculated based on four consecutive quarters of monitoring (or the LRAA calculated based on fewer than four quarters of data if the MCL would be exceeded regardless of the monitoring results of subsequent quarters) exceeds the subpart V MCLs in § 141.64(b)(3). You are in violation of the monitoring requirements for each quarter that a monitoring result would be used in calculating an LRAA if you fail to monitor.

(c) You may return to routine monitoring once you have conducted increased monitoring for at least four consecutive quarters and the LRAA for every location is ≤0.060 mg/L for TTHM and ≤0.045 mg/L for HAA5.

§ 141.626 Significant excursions.

If a significant excursion occurs, you must conduct a significant excursion evaluation and prepare a written report of the evaluation no later than 90 days after being notified of the analytical result that shows the significant excursion. You must discuss the evaluation with the State no later than the next sanitary survey for your system. Your evaluation must include an examination of distribution system operational practices that may contribute to TTHM and HAA5 formation (such as flushing programs and storage tank operations and excess capacity) and how these practices may be modified to reduce TTHM and HAA5 levels.

§ 141.627 Requirements for remaining on reduced TTHM and HAA5 monitoring based on subpart L results.

You may remain on reduced monitoring after the dates identified in § 141.620(c) for compliance with this subpart only if you qualify for a 40/30 certification under § 141.603(b) or have received a very small system waiver under § 141.603(c), plus you meet the reduced monitoring criteria in § 141.623(c), and you do not change or add monitoring locations from those used for compliance monitoring under subpart L. If your monitoring locations under this subpart differ from your monitoring locations under subpart L, you may not remain on reduced monitoring after the dates identified in § 141.620(c) for compliance with this subpart.

§ 141.628 Requirements for remaining on increased TTHM and HAA5 monitoring based on subpart L results.

If you were on increased monitoring under subpart L, you must remain on increased monitoring until you qualify for a return to routine monitoring under § 141.625(c). You must conduct increased monitoring under § 141.625 at the monitoring locations in the monitoring plan developed under § 141.622 beginning at the date identified in § 141.620(c) for compliance with this subpart and remain on increased monitoring until you qualify for a return to routine monitoring under § 141.625(c).

§ 141.629 [Reserved]

§ 141.630 Reporting and recordkeeping requirements.

(a) *Reporting.* (1) You must report the following information for each monitoring location to the State within 10 days of the end of any quarter in which monitoring is required:

(i) Number of samples taken during the last quarter.

(ii) Date and results of each sample taken during the last quarter.

(iii) Arithmetic average of quarterly results for the last four quarters (LRAAs).

(iv) Whether the MCL was violated.

(2) If you are a subpart H system seeking to qualify for or remain on reduced TTHM/HAA5 monitoring, you must report the following source water TOC information for each treatment plant that treats surface water or ground water under the direct influence of surface water to the State within 10 days of the end of any quarter in which monitoring is required:

(i) The number of source water TOC samples taken each month during last quarter.

(ii) The date and result of each sample taken during last quarter.

(iii) The quarterly average of monthly samples taken during last quarter.

(iv) The running annual average (RAA) of quarterly averages from the past four quarters.

(v) Whether the RAA exceeded 4.0 mg/L.

(b) *Recordkeeping.* You must retain any subpart V monitoring plans and your subpart V monitoring results as required by § 141.33.

PART 142— NATIONAL PRIMARY DRINKING WATER REGULATIONS IMPLEMENTATION

1. The authority citation for part 142 continues to read as follows:

Authority: 42 U.S.C. 300f, 300g–1, 300g–2, 300g–3, 300g–4, 300g–5, 300g–6, 300j–4, 300j–9, and 300j–11.

2. Section 142.14 is amended by adding paragraph (a)(8) to read as follows:

§ 142.14 Records kept by States.

(a) * * *

(8) Any decisions made pursuant to the provisions of 40 CFR part 141, subparts U and V of this chapter.

(i) Those systems for which the State has determined that the 40 CFR part 141, subpart L approved monitoring site is representative of the highest TTHM and HAA5 and therefore have been granted a very small system waiver under § 141.603(c) of this chapter. The State must provide a copy of the decision to the system. A copy of the decision must be kept until reversed or revised.

(ii) System IDSE reports, plus any modifications required by the State. Reports must be kept until reversed or revised in their entirety.

* * * * *

3. Section 142.16 is amended by adding paragraph (m) to read as follows:

§ 142.16 Special primacy conditions.

* * * * *

(m) *Requirements for States to adopt 40 CFR part 141, subparts U and V.* In addition to the general primacy requirements elsewhere in this part, including the requirements that State regulations be at least as stringent as federal requirements, an application for approval of a State program revision that adopts 40 CFR part 141, subparts U

and V, must contain a description of how the State will accomplish the following:

(1) For PWSs serving fewer than 500 people, a very small system waiver procedure for subpart U IDSE requirements that will apply to all systems that serve fewer than 500 people without the State making a system-by-system waiver determination, if the State elects to use such an authority.

(2) A procedure for evaluating system-specific studies under § 141.603(a) of this chapter, if system-specific studies are conducted in the State.

(3) A procedure for determining that multiple consecutive system entry points from a single wholesale system to a single consecutive system should be treated as a single treatment plant for monitoring purposes.

(4) A procedure for addressing consecutive systems outside the provisions of § 141.29 of this chapter or part 141 subparts U and V of this chapter, if the State elects to use such an authority.

(5) A procedure for systems to identify significant excursions.

PART 143—NATIONAL SECONDARY DRINKING WATER REGULATIONS

1. The authority citation for part 143 continues to read as follows:

Authority: 42 U.S.C. 300f *et seq.*

2. In § 143.4, the table in paragraph (b) is amended by revising entries 2 and 9 and footnotes 3 and 4, and by adding footnote 6 to read as follows:

§ 143.4 Monitoring.

* * * * *

(b) * * *

Contaminant	EPA	ASTM [3]	SM [4] 18th and 19th ed.	SM [4] 20th ed.	Other
* *		*	* *	*	*
2. Chloride	300.0 [1]	D4327–97	4110 B	4110 B.	
	300.1 [6]			.	
			4500–Cl^- D	4500–Cl^- D	
		D512–89B	4500–Cl^- B	4500–Cl^- B	
* *		*	* *	*	*
9. Sulfate	300.0 [1]	D4327–97	4110B	4110B.	
	300.1 [6]				
	375.2 [1]		4500–SO_4^{2-} F	4500–SO_4^{2-} F.	
			4500–SO_4^{2-} C, D	4500–SO_4^{2-} C, D.	
		D516–90	4500–SO_4^{2-} E	4500–SO_4^{2-} E.	
* *		*	* *	*	*

* * * * *

[1] "Methods for the Determination of Inorganic Substances in Environmental Samples", EPA/600/R–93–100, August 1993. Available at NTIS, PB94–120821.

* * * * *

[3] *Annual Book of ASTM Standards,* 1994, 1996, or 1999, Vols. 11.01 and 11.02, ASTM International; any year containing the cited version of the method may be used. Copies may be obtained from ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428.

[4] *Standard Methods for the Examination of Water and Wastewater,* 18th edition (1992), 19th edition (1995), or 20th edition (1998). American Public Health Association, 1015 Fifteenth Street, NW, Washington, DC 20005. The cited methods published in any of these three editions may be used, except that the versions of 3111 B, 3111 D, and 3113 B in the 20th edition may not be used.

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[6] "Methods for the Determination of Organic and Inorganic Compounds in Drinking Water", Vol. 1, EPA 815-R–00–014, August 2000. Available at NTIS, PB2000–106981.

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